



Updated Seq Listing2.ST25.txt
SEQUENCE LISTING

<110> Bionomics Limited

<120> A DIAGNOSTIC METHOD FOR EPILEPSY

<130> 1386/19

<140> 10/806,899

<141> 2004-03-23

<160> 124

<170> PatentIn version 3.3

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Updated Seq Listing2.ST25.txt

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| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgccctcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
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| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
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| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagaggtga | 2280 |
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| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
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Updated Seq Listing2.ST25.txt

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| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
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Updated Seq Listing2.ST25.txt

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Updated Seq Listing2.ST25.txt

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| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg | 180 |
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Updated Seq Listing2.ST25.txt

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| aaaaggcaaa | gaatcccaaa | ccagacaaaa | aagatgacga | cgaaaatggc | ccaaagccaa | 420 |
| atagtgactt | ggaagctgga | aagaaccttc | cattttattta | tggagacatt | cctccagaga | 480 |
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| ggctcgatth | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
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| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagcttttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
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Updated Seq Listing2.ST25.txt

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| cagcagaaat | gtttctgaaa | attattgcc | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctgg | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgtttctc | cgttcatttc | gattgctg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaatatg | ctaataaaga | tcacgga | ttccgtggg | gctctgggaa | 2940 |
| atttaaccct | cgcttggcc | atcatcgtct | tcatttttgc | cggtgctggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgatttgtgt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaatttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgt | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tgccatatgg | ctatcaaaca | tatttcacca | atgcctgggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaattctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attgggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tgagagagtgt | gtactgaaac | 5040 |
| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctgtt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcatctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatgtt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtgggtg | aacatgtaca | tcgcgggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaacaaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
| caaagcgggt tctaggagag agtggagaga tggatgctct acgaatacag atggaagagc | 5940 |
| gattcatggc ttccaatcct tccaaggtct cctatcagcc aatcactact actttaaaac | 6000 |
| gaaaacaaga ggaagtatct gctgtcatta ttcagcgtgc ttacagacgc caccttttaa | 6060 |
| agcgaactgt aaaacaagct tcctttacgt acaataaaaa caaaatcaaa ggtggggcta | 6120 |
| atcttcttat aaaagaagac atgataattg acagaataaa tgaaaactct attacagaaa | 6180 |
| aaactgatct gaccatgtcc actgcagctt gtccaccttc ctatgaccgg gtgacaaagc | 6240 |
| caattgtgga aaaacatgag caagaaggca aagatgaaaa agccaaaggg aaataaatga | 6300 |
| aaataaataa aaataattgg gtgacaaatt gtttacagcc tgtgaagggtg atgtattttt | 6360 |
| atcaacagga ctctcttagg aggtcaatgc caaactgact gtttttacac aaatctcctt | 6420 |
| aaggtcagtg cctacaataa gacagtgacc ccttgtcagc aaactgtgac tctgtgtaaa | 6480 |
| ggggagatga ccttgacagg aggttactgt tctcactacc agctgacact gctgaagata | 6540 |
| agatgcacaa tggctagtca gactgtaggg accagtttca aggggtgcaa acctgtgatt | 6600 |
| ttggggttgt ttaacatgaa acactttagt gtagtaattg tatccactgt ttgcatttca | 6660 |
| actgccacat ttgtcacatt tttatggaat ctgttagtgg attcatcttt ttgttaatcc | 6720 |
| atgtgtttat tatatgtgac tatttttcta aacgaagttt ctgttgagaa ataggctaag | 6780 |
| gacctctata acaggtatgc cacctggggg gtatggcaac cacatggccc tcccagctac | 6840 |
| acaaagtcgt ggtttgcag agggcatgct gcacttagag atcatgcatg agaaaaagtc | 6900 |
| acaagaaaaa caaattctta aatttcacca tatttctggg aggggtaatt ggggtgataag | 6960 |
| tggagggtgct ttgttgatct tgttttgcga aatccagccc ctagaccaag tagattattt | 7020 |
| gtgggtaggc cagtaaatct tagcaggtgc aaacttcatt caaatgtttg gagtcataaa | 7080 |
| tgttatgttt ctttttgttg tattaataaa aaaacctgaa tagtgaatat tgcccctcac | 7140 |
| cctccaccgc cagaagactg aattgaccaa aattactctt tataaatttc tgctttttcc | 7200 |
| tgcactttgt ttagccatct ttgggctctc agcaagggtg aactgtata tgттаatgaa | 7260 |
| atgctattta ttatgtaaat agtcatttta ccctgtggtg cacgtttgag caaacaataa | 7320 |
| atgacctaaag cacagtattt attgcatcaa atatgtacca caagaaatgt agagtgaag | 7380 |
| ctttacacag gtaataaaat gtattctgta ccatttatag atagtttgga tgctatcaat | 7440 |
| gcatgtttat attaccatgc tgctgtatct ggtttctctc actgctcaga atctcattta | 7500 |
| tgagaaaacca tatgtcagtg gtaaagtcaa ggaaattgtt caacagatct catttattta | 7560 |
| agtcattaag caatagtttg cagcacttta acagcttttt ggttattttt acattttaag | 7620 |
| tggataacat atggtatata gccagactgt acagacatgt ttaaaaaaac aactgctta | 7680 |
| acctattaaa tatgtgttta gaattttata agcaaatata aatactgtaa aaagtcactt | 7740 |
| tattttattt ttcagcatta tgtacataaa tatgaagagg aaattatctt caggttgata | 7800 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| attttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttattt | t | | 8381 |

<210> 3
 <211> 8381
 <212> DNA
 <213> homo sapiens

| | |
|-------------|--|
| <400> 3 | |
| atactgcaga | ggctcttggt gcatgtgtgt atgtgtgctg ttgtgtgtgt ttgtgtgtct 60 |
| gtgtgttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgctggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga 480 |
| tgggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa actttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttta 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |
| tgctaattat | gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aacctcctg 720 |
| attggacaaa | gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttaaaa 780 |
| aaattattgc | aaggggattc tgtttagaag attttacttt ctttcgggat ccatggaact 840 |
| ggctcgattt | cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg 900 |
| tctcggcatt | gagaacattc agagttctcc gagcattgaa gacgatttca gtcattccag 960 |
| gcctgaaaac | cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga 1020 |
| tcctgactgt | gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca 1080 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctaccta | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgg | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctgggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aagggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagagggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtga | catgttgtca | acctgggtgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcc | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctgg | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcatcggcaa | ttccgtgggg | gctctgggaa | 2940 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
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| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaaag | 3480 |
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| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
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| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
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| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |

Updated Seq Listing2.ST25.txt

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| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tggagagtgt | gtactgaaac | 5040 |
| tcattctctt | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcattctacg | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatggt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtggtg | aacatgtaca | tcgcggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctcctttagg | aggatcaatgc | caaactgact | gtttttacac | aaatctcctt | 6420 |
| aaggtcagt | cctacaataa | gacagtgacc | ccttgctcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttgggggttg | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtg | attcatcttt | ttgttaatcc | 6720 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| gacctctata | acagggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcattg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggagggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattatTT | 7020 |
| gtgggtaggc | cagtaaattct | tagcagggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgccccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgtaaatgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtgggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaa | cacagtattt | attgcatcaa | atatgtacca | caagaaatgt | agagtgcagg | 7380 |
| ctttacacag | gtaataaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagtg | gtaaagtcaa | ggaaattggt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaatata | aatactgtaa | aaagtcactt | 7740 |
| tattttatTT | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | cagggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttatTT | t | | 8381 |

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 <211> 8381
 <212> DNA
 <213> homo sapiens
 <400> 4

Updated Seq Listing2.ST25.txt

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| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctctctttt ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg | 240 |
| gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg | 300 |
| acagcttcaa cttcttcacc agagaatctc ttgcggttat tgaaagacgc attgcagaag | 360 |
| aaaaggcaaa gaatcccaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa | 420 |
| atagtgcatt ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga | 480 |
| tggtgtcaga gccctggag gacctggacc cttactatat caataagaaa actttttatag | 540 |
| tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa | 600 |
| ctcccttcaa tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca | 660 |
| tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aacctctctg | 720 |
| attggacaaa gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa | 780 |
| aaattattgc aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact | 840 |
| ggctcgattt cactgtcatt agatttgcgt acgtcacaga gtttgtggac ctgggcaatg | 900 |
| tctcggcatt gagaacattc agagtctcc gagcattgaa gacgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcatgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttgagag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggttttttag | 1260 |
| atgcactact atgtggaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |
| tctacctaataa aaatttgatc ctggctgtgg tggccatggc ctacgaggaa cagaatcagg | 1560 |
| ccaccttgga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta | 1620 |
| aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag | 1680 |
| agcccagtgct agcaggcagg ctctcagaca gctcatctga agcctctaag ttgagttcca | 1740 |
| agagtgctaa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg | 1800 |
| gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga | 1860 |
| aagggttttcg cttctccatt gaagggaacc gattgacata tgaaaagagg tactcctccc | 1920 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagcttttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaia | catgtttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaia | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcatcggaia | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtgggtcggc | atgcagctct | 3000 |
| ttggtaaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgctgtctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggg | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaatttaaac | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
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Updated Seq Listing2.ST25.txt

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| tccgaatagt tgaacataac tggtttgaga ctttcattgt tttcatgatt ctccttagta | 3960 |
| gtggtgctct ggcatttgaa gatatatata ttgatcagcg aaagacgatt aagacgatgt | 4020 |
| tggaatatgc tgacaagggt ttcacttaca ttttcattct ggaaatgctt ctaaaatggg | 4080 |
| tggcatatgg ctatcaaaca tatttcacca atgcctggtg ttggctggac ttcttaattg | 4140 |
| ttgatgtttc attggtcagt ttaacagcaa atgccttggg ttactcagaa cttggagcca | 4200 |
| tcaaactctc caggacacta agagctctga gacctctaag agccttatct cgatttgaag | 4260 |
| ggatgagggt ggttgtgaat gcccttttag gagcaattcc atccatcatg aatgtgcttc | 4320 |
| tggtttgtct tatattctgg ctaattttca gcatcatggg cgtaaatttg tttgctggca | 4380 |
| aattctacca ctgtattaac accacaactg gtgacagggt tgacatcgaa gacgtgaata | 4440 |
| atcactactga ttgcctaaaa ctaatagaaa gaaatgagac tgctcgatgg aaaaatgtga | 4500 |
| aagtaaaactt tgataatgta ggatttgggt atctctcttt gcttcaagtt gccacattca | 4560 |
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| agtatgaaaa aagtctgtac atgtatcttt actttgttat tttcatcatc tttgggtcct | 4680 |
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| agtttggagg tcaagacatc tttatgacag aagaacagaa gaaatactat aatgcaatga | 4800 |
| aaaaattagg atcgaaaaaa ccgcaaaagc ctatacctcg accaggaaac aaatttcaag | 4860 |
| gaatggtctt tgacttcgta accagacaag tttttgacat aagcatcatg attctcatct | 4920 |
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| tcatctctct acgccattat tattttacca ttggatggaa tatttttgat tttgtggttg | 5100 |
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| ctaccctgtt ccgagtgatc cgtcttgcta ggattggccg aatcctacgt ctgatcaaag | 5220 |
| gagcaaaggg gatccgcacg ctgctctttg ctttgatgat gtcccttcct gcgttgttta | 5280 |
| acatcggcct cctactcttc ctagtcatgt tcatctacgc catctttggg atgtccaact | 5340 |
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| tatccttcct ggttgtggtg aacatgtaca tcgcggtcat cctggagaac ttcagtgttg | 5640 |
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Updated Seq Listing2.ST25.txt

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| gaaaacaaga ggaagtatct gctgtcatta ttcagcgtgc ttacagacgc caccttttaa | 6060 |
| agcgaactgt aaaacaagct tcctttacgt acaataaaaa caaaatcaaa ggtggggcta | 6120 |
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| aaactgatct gaccatgtcc actgcagctt gtccaccttc ctatgaccgg gtgacaaagc | 6240 |
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| cctccaccgc cagaagactg aattgaccaa aattactctt tataaatttc tgctttttcc | 7200 |
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| atgacctaa cagagtattt attgcatcaa atatgtacca caagaaatgt agagtgaag | 7380 |
| ctttacacag gtaataaaaat gtattctgta ccatttatag atagtttgga tgctatcaat | 7440 |
| gcatgtttat attaccatgc tgctgtatct ggtttctctc actgctcaga atctcattta | 7500 |
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Updated Seq Listing2.ST25.txt

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| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaataa | aatactgtaa | aaagtcactt | 7740 |
| tattttatTT | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtactTTTT | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgt | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttatTT | t | | 8381 |

<210> 5
 <211> 8381
 <212> DNA
 <213> homo sapiens

| | | | | | | |
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| gtgtgttctg | ccccagttag | actgcagccc | ttgtaaatac | tttgacacct | tttgcaagaa | 120 |
| ggaatctgaa | caattgcaac | tgaaggcaca | ttgttatcat | ctcgtctttg | ggtgatgctg | 180 |
| ttcctcactg | cagatggata | attttccttt | taatcaggaa | tttcatatgc | agaataaatg | 240 |
| gtaattaaaa | tgtgcaggat | gacaagatgg | agcaaacagt | gcttgtacca | ccaggacctg | 300 |
| acagcttcaa | cttcttcacc | agagaatctc | ttgcggctat | tgaaagacgc | attgcagaag | 360 |
| aaaaggcaaa | gaatcccaaa | ccagacaaaa | aagatgacga | cgaaaatggc | ccaaagccaa | 420 |
| atagtgactt | ggaagctgga | aagaaccttc | catttatTTa | tggagacatt | cctccagaga | 480 |
| tggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | acttttatag | 540 |
| tattgaataa | attgaaggcc | atcttccggt | tcagtgccac | ctctgccctg | tacattttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | attttacttt | ccttcgggat | ccatggaact | 840 |

Updated Seq Listing2.ST25.txt

| | |
|---|------|
| ggctcgattt cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg | 900 |
| tctcggcatt gagaacattc agagtctctc gagcattgaa gatgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggttttttag | 1260 |
| atgcactact atgtggaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |
| tctacctaataa aaatttgatc ctggctgtgg tggccatggc ctacgaggaa cagaatcagg | 1560 |
| ccaccttggga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta | 1620 |
| aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag | 1680 |
| agcccagtgc agcaggcagg ctctcagaca gctcatctga agcctctaag ttgagttcca | 1740 |
| agagtgcataa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg | 1800 |
| gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga | 1860 |
| aagggttttcg cttctccatt gaaggggaacc gattgacata tgaaaagagg tactcctccc | 1920 |
| cacaccagtc tttgttgagc atccgtggct ccctattttc accaaggcga aatagcagaa | 1980 |
| caagcctttt cagctttaga gggcgagcaa aggatgtggg atctgagaac gacttcgcag | 2040 |
| atgatgagca cagcaccttt gaggataacg agagccgtag agattccttg tttgtgcccc | 2100 |
| gacgacacgg agagagacgc aacagcaacc tgagtcagac cagtaggtca tcccggatgc | 2160 |
| tggcagtgtt tccagcgaat gggaagatgc acagcactgt ggattgcaat ggtgtggttt | 2220 |
| ccttggttgg tggaccttca gttcctacat cgcctgttgg acagcttctg ccagaggtga | 2280 |
| taatagataa gccagctact gatgacaatg gaacaaccac tgaaactgaa atgagaaaga | 2340 |
| gaagggtcaag ttctttccac gtttccatgg actttctaga agatccttcc caaaggcaac | 2400 |
| gagcaatgag tatagccagc attctaacia atacagtaga agaacttgaa gaatccaggc | 2460 |
| agaaatgccc accctgttgg tataaatttt ccaacatatt cttaatctgg gactgttctc | 2520 |
| catattggtt aaaagtgaac catgttgtca acctggttgt gatggacca tttgttgacc | 2580 |
| tggccatcac catctgtatt gtcttaataa ctcttttcat ggccatggag cactatccaa | 2640 |
| tgacggacca tttcaataat gtgcttacag taggaaactt ggttttcact gggatcttta | 2700 |
| cagcagaaat gtttctgaaa attattgcca tggatcctta ctattatttc caagaaggct | 2760 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|-------------|------------|-------------|-------------|------------|------|
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| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaatatg | ctaataaaga | tcacgaggaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttgccc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtggt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcacgatggg | catgggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtccta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaaac | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attgggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaactctc | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtcct | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tgagagagtgt | gtactgaaac | 5040 |
| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcatctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatggt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtggtg | aacatgtaca | tcgcggtcat | cctggagaac | ttcagtgttg | 5640 |
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| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttagg | aggatcaatgc | caaactgact | gtttttacac | aaatctcctt | 6420 |
| aagggtcagt | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| ttggggttgt | ttaacatgaa | acacttttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtgg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatTTTTgtA | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcAtg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggaggTgct | ttgttgatct | Tgttttgcga | aatccagccc | ctagaccaag | tagattatTT | 7020 |
| gtgggtaggc | cagtaaAtct | tagcaggTgc | aaacttcatt | caaAtgtttg | gagtcataaa | 7080 |
| Tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | TgccccTcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | Tgctttttcc | 7200 |
| Tgcactttgt | ttagccatct | ttgggctctc | agcaaggTtg | acactgtata | Tgttaatgaa | 7260 |
| atgctatTTa | Ttatgtaaat | agtcattTTa | ccctgtggTg | cacgtttgag | caaacaaata | 7320 |
| atgacctaag | cacagtatTT | attgcatcaa | atatgtacca | caagaaatgt | agagtgcAag | 7380 |
| ctttacacag | gtaataaaaT | gtattctgta | ccatttatag | atagtttgga | Tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | Tgctgtatct | ggtttctctc | actgctcaga | atctcattTa | 7500 |
| Tgagaaacca | tatgtcagTg | gtaaagTcaa | ggaaattgtt | caacagatct | cattttatTTa | 7560 |
| agtcattaag | caatagTttg | cagcactTTa | acagctTTTT | ggttatTTTT | acattTTaag | 7620 |
| Tggataacat | atggtatata | gccagactgt | acagacatgt | Ttaaaaaaac | acactgctTa | 7680 |
| acctattaaa | tatgtgtTTa | gaattttata | agcaaataata | aatactgtaa | aaagtcactT | 7740 |
| tattttatTT | Ttcagcatta | Tgtacataaa | tatgaagagg | aaattatctt | caggTtgata | 7800 |
| Tcacaatcac | TTTTcttact | Ttctgtccat | agtactTTTT | catgaaagaa | attTgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagTtgt | agatttctgc | TTTTtaaatt | acattTgcta | 7920 |
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| actgaattga | aggtagTgct | tatgttattt | TtgTtctttt | Tttctgactt | cggtttatgt | 8100 |
| Tttcatttct | Ttggaagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| TTTTTTTTTc | cacaaaaaca | gagtagTcaa | cttatatagt | caattacatc | aggacattTT | 8220 |
| gtgtttctTa | cagaagcaaa | ccataggctc | ctcttttcct | Taaaactact | tagataaaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | Taaataatgc | Taaccaacat | 8340 |
| Ttaaaatgtg | caaaactaat | aaagattaca | TTTTttattt | T | | 8381 |

Updated Seq Listing2.ST25.txt

<210> 6
 <211> 8381
 <212> DNA
 <213> homo sapiens

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 ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctctgtctttg ggtgatgctg 180
 ttcttactg cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240
 gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300
 acagcttcaa cttcttcacc agagaatctc ttgctgctat tgaaagacgc attgcagaag 360
 aaaaggcaaa gaatcccaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420
 atagtgactt ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga 480
 tgggtgtcaga gcccttgag gacctggacc cttactatat caataagaaa acttttatag 540
 tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600
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Updated Seq Listing2.ST25.txt

| | | | | | | |
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| agagtgc | ggaagaaga | aatcgaggga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aagggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttggtgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtggt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtga | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttctact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctggt | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaa | gttaaatatg | ctaataaaga | tcacgagcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggtc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtcctta | 3600 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|------------|------------|-------------|------------|------------|------|
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaac | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaactctc | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaaact | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctattttac | tggagagtgt | gtactgaaac | 5040 |
| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctgtt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcatctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatgtt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|------------|------|
| ccatttctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtggtg | aacatgtaca | tcgcggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcc | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgtctt | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttagg | agggtcaatgc | caaactgact | gtttttacac | aaatctcctt | 6420 |
| aaggtcagtg | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttgggggttg | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatttttgta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcatg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggagggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaactt | tagcaggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgcccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgacttttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgttaatgaa | 7260 |
| atgctattta | ttatgtaa | agtcatttta | ccctgtggtg | cacgtttgag | caaacaata | 7320 |
| atgacctaag | cacagtattt | attgcatcaa | atatgtacca | caagaaatgt | agagtgaag | 7380 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|------|
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| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagtg | gtaaagtcaa | ggaaattggt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tgataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaatata | aatactgtaa | aaagtcactt | 7740 |
| tattttat | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| attttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttat | t | | 8381 |

<210> 7

<211> 8381

<212> DNA

<213> homo sapiens

<400> 7

| | | | | | | |
|------------|------------|------------|-------------|-------------|-------------|-----|
| atactgcaga | ggtctctggt | gcatgtgtgt | atgtgtgctg | ttgtgtgtgt | ttgtgtgtct | 60 |
| gtgtgttctg | ccccagtgag | actgcagccc | ttgtaaatac | tttgacacct | tttgcaagaa | 120 |
| ggaatctgaa | caattgcaac | tgaaggcaca | ttgttatcat | ctcgtctttg | ggtgatgctg | 180 |
| ttcctcactg | cagatggata | attttccttt | taatcaggaa | tttcatatgc | agaataaatg | 240 |
| gtaattaaaa | tgtgcaggat | gacaagatgg | agcaaacagt | gcttgtacca | ccaggacctg | 300 |
| acagcttcaa | cttcttcacc | agagaatctc | ttgctggctat | tgaaagacgc | attgcagaag | 360 |
| aaaaggcaaa | gaatcccaaa | ccagacaaaa | aagatgacga | cgaaaatggc | ccaaagccaa | 420 |
| atagtgcatt | ggaagctgga | aagaaccttc | cattttattta | tgagagacatt | cctccagaga | 480 |
| tggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | actttttatag | 540 |
| tattgaataa | attgaaggcc | atcttccggt | tcagtgccac | ctctgccctg | tacattttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|------------|------------|------------|-------------|------|
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | attttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgctg | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagttctcc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttgagg | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtccttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctaccta | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aagggttttcg | cttctccatt | gaaggggaac | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaaggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|-------------|-------------|------------|------------|------|
| catattgggtt | aaaagtgaaa | catgtttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggtttttact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcc | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctggt | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaatatg | ctaataaaga | tcatcgcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccacgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
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| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
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| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaatctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggt | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |

Updated Seq Listing2.ST25.txt

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| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtcct | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
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| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcatctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatgtt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgaactgt | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttggtgtg | aacatgtaca | tcgcggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaacaaaa | caaactccag | ctcattgccca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaagggtc | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttagg | agggtcaatgc | caaactgact | gttttttacac | aaatctcctt | 6420 |
| aagggtcagt | cctacaataa | gacagtgacc | ccttggtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttgggggtgt | ttaacatgaa | acacttttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtgg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatttttgta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcagt | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggaggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaactt | tagcaggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgccccctac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgttaatgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaa | cacagtatct | attgcatcaa | atatgtacca | caagaaatgt | agagtgcagg | 7380 |
| ctttacacag | gtaataaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagt | gtaaagtcaa | ggaaattgtt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaataa | aatactgtaa | aaagtcactt | 7740 |
| tattttatct | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagtgtg | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| attttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgt | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |

Updated Seq Listing2.ST25.txt

| | |
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| gtattcgtga actgcatgct ggaaaatgct actattatgc taaataatgc taaccaacat | 8340 |
| ttaaaatgtg caaaactaat aaagattaca ttttttattt t | 8381 |

<210> 8
 <211> 8381
 <212> DNA
 <213> homo sapiens

| | |
|--|------|
| <400> 8 | |
| atactgcaga ggtctctggt gcatgtgtgt atgtgtgctt ttgtgtgtgt ttgtgtgtct | 60 |
| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctctcttttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg | 240 |
| gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg | 300 |
| acagcttcaa cttcttcacc agagaatctc ttgctggctat tgaaagacgc attgcagaag | 360 |
| aaaaggcaaa gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa | 420 |
| atagtgaatt ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga | 480 |
| tggtgtcaga gccctggag gacctggacc cctactatat caataagaaa acttttatag | 540 |
| tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa | 600 |
| ctcccttcaa tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca | 660 |
| tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aacctcctg | 720 |
| attggacaaa gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa | 780 |
| aaattattgc aaggggattc tgtttagaag attttacttt ctttcgggat ccatggaact | 840 |
| ggctcgattt cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg | 900 |
| tctcggcatt gagaacattc agagtctcc gagcattgaa gacgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttgag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggttttttag | 1260 |
| atgcactact atgtggaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | |
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| ccaccttg | ga | agaagcaga | a | cagaaagagg | c | ccgaatttca | g | gcagatgatt | g | aacagctta | 1620 |
| aaaagca | aca | ggaggcag | c | cagcaggcag | c | caacggcaac | t | gcctcagaa | c | cattccagag | 1680 |
| agcccagt | gc | agcaggcagg | c | tctcagaca | g | ctcatctga | a | gcctctaag | t | tgagttcca | 1740 |
| agagtgc | taa | ggaaaga | a | aatcggagga | a | agaaaagaaa | a | acagaaagag | c | agtctggtg | 1800 |
| gggaagag | aa | agatgaggat | g | gaattccaaa | a | aatctgaatc | t | gaggacagc | a | tcaggagga | 1860 |
| aaggttt | tcg | cttctccatt | g | gaaggaacc | c | gattgacata | t | gaaaagagg | g | tactcctccc | 1920 |
| cacaccagt | c | ttgttgagc | a | atccgtggct | c | ccctattttc | a | accaaggcga | a | atagcagaa | 1980 |
| caagcctt | ttt | cagctttaga | g | ggcgagcaa | a | aggatgtggg | a | ctctgagaac | g | acttcgcag | 2040 |
| atgatgag | ca | cagcacctt | t | gaggataacg | a | agagccgtag | a | gattccttg | t | ttgtgcccc | 2100 |
| gacgacac | gg | agagagacgc | a | aacagcaacc | t | gagtcagac | c | cagtaggtca | t | ccccgatgc | 2160 |
| tggcagtgt | t | tccagcgaat | g | gggaagatgc | a | acagcactgt | g | gattgcaat | g | gtgtggttt | 2220 |
| ccttggttg | g | tggaccttca | g | ttcctacat | c | gcctgttg | g | acagcttctg | c | cagaggtga | 2280 |
| taatagata | a | gccagctact | g | atgacaatg | a | gaacaaccac | t | gaaactgaa | a | atgagaaaga | 2340 |
| gaagggtca | a | gttcttccac | g | tttccatgg | a | actttctaga | a | gaccccttc | c | caaaggcaac | 2400 |
| gagcaatg | ag | tatagccagc | a | ttctaaca | a | atacagtaga | a | gaacttgaa | g | aatccaggc | 2460 |
| agaaatg | ccc | accctgttg | g | tataaatttt | c | caacatatt | c | ttaatctgg | g | actgttctc | 2520 |
| catattggt | t | aaaagtga | a | catgttgtca | a | acctggttgt | g | atggacca | c | ttgttgacc | 2580 |
| tggccatca | c | catctgtatt | g | tttaata | a | ctctttcat | g | gccatggag | a | cactatccaa | 2640 |
| tgacggacca | t | ttcaataat | g | tgcttacag | a | taggaaactt | g | gttttact | c | ggatcttta | 2700 |
| cagcagaa | at | gtttctgaa | a | attattgcca | a | tggatcctta | c | tattatttc | c | caagaaggct | 2760 |
| ggaatatct | t | tgacggtttt | a | ttgtgacgc | c | ttagcctggt | a | gaacttgga | a | ctcgccaatg | 2820 |
| tggaaggat | t | atctgttctc | c | gttcatttc | c | gattgctgcg | a | gttttcaag | a | ttggcaaat | 2880 |
| cttggcca | a | gttaaatatg | a | ctaataaaga | a | tcacggcaa | a | ttccgtggg | g | gctctgggaa | 2940 |
| atttaacc | ct | cgtcttg | gcc | atcatcgtct | c | tcatttttgc | c | gtggtcggc | a | atgcagctct | 3000 |
| ttggtaaa | a | ctacaaagat | g | tgtgtctgca | a | agatcgccag | t | gattgtcaa | c | ctcccacgct | 3060 |
| ggcacatga | a | tgacttcttc | c | actccttc | c | tgattgtgtt | c | cgcggtgctg | t | tgtggggagt | 3120 |
| ggatagag | ac | catgtgggac | t | gtatggagg | g | ttgctggtca | a | gcatgtgc | c | ttactgtct | 3180 |
| tcatgatgg | t | catggtgatt | g | gaaacctag | a | tggctctgaa | t | ctctttctg | g | cccttgcttc | 3240 |
| tgagctcatt | a | tagtgcagac | a | accttgca | c | ccactgatga | t | gataatgaa | a | atgaataatc | 3300 |
| tccaaattgc | a | tgtggatagg | a | atgcacaaag | a | gagtagctta | t | tgtgaaaaga | a | aaaatatatg | 3360 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtcctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgac | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctgggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttgagacca | 4200 |
| tcaaatctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
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| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
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| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
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| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
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Updated Seq Listing2.ST25.txt

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| atgtgtttat tatatgtgac tttttttgta aacgaagttt ctgttgagaa ataggctaag | 6780 |
| gacctctata acaggtatgc cacctggggg gtatggcaac cacatggccc tcccagctac | 6840 |
| acaaagtcgt ggtttgcatg agggcatgct gcacttagag atcatgcatg agaaaaagtc | 6900 |
| acaagaaaaa caaattctta aatttcacca tttttctggg aggggtaatt gggtgataag | 6960 |
| tggagggtgct ttgttgatct tgttttgcga aatccagccc ctagaccaag tagattattt | 7020 |
| gtgggtaggc cagtaaatct tagcaggtgc aaacttcatt caaatgtttg gagtcataaa | 7080 |
| tgttatgttt ctttttgttg tattaaaaaa aaaacctgaa tagtgaatat tgcccctcac | 7140 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|------------|-------------|------------|-------------|------|
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| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgттаатgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtgggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaag | cacagtatth | attgcatcaa | atatgtacca | caagaaatgt | agagtgcagg | 7380 |
| ctttacacag | gtaataaaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
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| tgagaaaacca | tatgtcagtg | gtaaagtcaa | ggaaattggt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggaatacat | atgggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaatata | aatactgtaa | aaagtcactt | 7740 |
| tattttattt | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaaactaat | aaagattaca | ttttttattt | t | | 8381 |

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| gtgtgtttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtagca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | acttttatag | 540 |
| tattgaataa | attgaaggcc | atcttccggt | tcagtgccac | ctctgccctg | tacattttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | atcttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagttctcc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttggag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaat | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgcata | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aagggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtggt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | gggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagagggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |

Updated Seq Listing2.ST25.txt

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| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattggtt | aaaagtgaaa | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcatcgga | ttccgtggg | gctctgggaa | 2940 |
| atttaaccct | cgctctggcc | atcatcgtct | tcatttttgc | cggtgctggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtcctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaatttaaac | acggaagact | 3660 |
| ttagtagtga | atcggtatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
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Updated Seq Listing2.ST25.txt

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| ggatgagggg | ggttgatgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatatctctg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | tggcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttggtt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttgagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tggagagtgt | gtactgaaac | 5040 |
| tcattctctc | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctgtt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcattctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatggt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
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| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcca | 5820 |
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| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggctc | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
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Updated Seq Listing2.ST25.txt

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| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttagg | agggtcaatgc | caaactgact | gttttttacac | aaatctcctt | 6420 |
| aagggtcagt | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttggggttgt | ttaacatgaa | acacttttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtgg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatttttcta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcagt | agggcagtct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggagggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaactt | tagcagggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgcccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgtaaatgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaa | cacagtattt | attgcatcaa | atatgtacca | caagaaatgt | agagtgaag | 7380 |
| ctttacacag | gtaataaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagt | gtaaagtcaa | ggaaattggt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtgtg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaatata | aatactgtaa | aaagtcactt | 7740 |
| tattttat | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | cagggtgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagtgtg | agatttctgc | tttttaaatt | acatttgcta | 7920 |
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Updated Seq Listing2.ST25.txt

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| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttattt | t | | 8381 |

<210> 10
 <211> 8381
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| gtgtgttctg | ccccagttag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctctcttttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga 480 |
| tggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa actttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |
| tgctaattat | gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg 720 |
| attggacaaa | gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa 780 |
| aaattattgc | aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact 840 |
| ggctcgattt | cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg 900 |
| tctcggcatt | gagaacattc agagtctctc gagcattgaa gacgatttca gtcattccag 960 |
| gcctgaaaac | cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga 1020 |
| tcctgactgt | gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca 1080 |
| acctgaggaa | taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta 1140 |
| tagaaaagaa | tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt 1200 |
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Updated Seq Listing2.ST25.txt

| | | | | | | |
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| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaata | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttggga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgccctcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgtctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtggt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtga | catgttgtca | acctgggtgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggtttttact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgttctc | cgttcatttc | gattgctg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcacgcggca | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|------------|------------|------------|-------------|------|
| tcgatgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgac | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtcctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgac | ctgtagaaga | acagcccgt | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaactctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcaccag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tggagagtgt | gtactgaaac | 5040 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
| tcattctctct | acgccattat | tatttttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcattctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagaggga | gttgggatcg | atgacatgtt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtggtg | aacatgtaca | tcgcggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcattggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgccca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctcctttagg | aggatcaatgc | caaactgact | gtttttacac | aatctcctt | 6420 |
| aagggtcagt | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttggggttgt | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatttttgta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggatgac | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcatg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |

Updated Seq Listing2.ST25.txt

| | |
|---|------|
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| gtgggtaggc cagtaaactct tagcaggtgc aaacttcatt caaatgtttg gagtcataaa | 7080 |
| tgttatgttt ctttttgttg tattaataaaa aaaacctgaa tagtgaatat tgccccctcac | 7140 |
| cctccaccgc cagaagactg aattgaccaa aattactctt tataaatttc tgctttttcc | 7200 |
| tgcactttgt ttagccatct ttgggctctc agcaagggtg acactgtata tgtaaatgaa | 7260 |
| atgctattta ttatgtaa | 7320 |
| atgacctaag cacagtattt attgcatcaa atatgtacca caagaaatgt agagtgaag | 7380 |
| ctttacacag gtaataaaat gtattctgta ccatttatag atagtttgga tgctatcaat | 7440 |
| gcatgtttat attaccatgc tgctgtatct ggtttctctc actgctcaga atctcattta | 7500 |
| tgagaaacca tatgtcagtg gtaaagtcaa ggaaattgtt caacagatct cttttattta | 7560 |
| agtcattaag caatagtttg cagcacttta acagcttttt ggttattttt acattttaag | 7620 |
| tggataacat atggtatata gccagactgt acagacatgt ttaaaaaaac acactgctta | 7680 |
| acctattaaa tatgtgttta gaattttata agcaaatata aatactgtaa aaagtcactt | 7740 |
| tattttat | 7800 |
| tcacaatcac ttttcttact ttctgtccat agtacttttt catgaaagaa atttgctaaa | 7860 |
| taagacatga aaacaagact gggtagttgt agatttctgc tttttaaatt acatttgcta | 7920 |
| atttttagatt atttcacaat ttttaaggagc aaaatagggt cagattcat atccaaatta | 7980 |
| tgctttgcaa ttggaaaagg gtttaaaatt ttatttatat ttctggtagt acctgtacta | 8040 |
| actgaattga aggtagtgct tatgttattt ttgttctttt tttctgactt cggtttatgt | 8100 |
| tttcatttct ttggagtaat gctgctctag attgttctaa atagaatgtg ggcttcataa | 8160 |
| tttttttttc cacaaaaaca gagtagtcaa cttatatagt caattacatc aggacatttt | 8220 |
| gtgtttctta cagaagcaaa ccataggctc ctcttttcct taaaactact tagataaact | 8280 |
| gtattcgtga actgcatgct ggaaaatgct actattatgc taaataatgc taaccaacat | 8340 |
| ttaaaatgtg caaaactaat aaagattaca ttttttattt t | 8381 |

<210> 11
 <211> 8381
 <212> DNA
 <213> homo sapiens

| | |
|---|-----|
| <400> 11 | |
| atactgcaga ggtctctggt gcatgtgtgt atgtgtgcgt ttgtgtgtgt ttgtgtgtct | 60 |
| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa tttcatatgc agaataaatg | 240 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gtaattaaaa | tgtgcaggat | gacaagatgg | agcaaacagt | gcttgtacca | ccaggacctg | 300 |
| acagcttcaa | cttcttcacc | agagaatctc | ttgcggctat | tgaaagacgc | attgcagaag | 360 |
| aaaaggcaaa | gaatcccaaa | ccagacaaaa | aagatgacga | cgaaaatggc | ccaaagccaa | 420 |
| atagtgaact | ggaagctgga | aagaaccttc | cattttattta | tggagacatt | cctccagaga | 480 |
| tggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | actttttatag | 540 |
| tattgaataa | attgaaggcc | atcttccggt | tcagtgccac | ctctgccctg | tacatttttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | atcttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagttctcc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttggag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaata | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgccctcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttggttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagcttttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcttgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaaggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaaa | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
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| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
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| cttggccaac | gttaaataatg | ctaataaaga | tcatcggcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgatttgtgt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
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| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
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Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaattctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatatctctg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatgggtctt | tgacttcgta | accagacaag | tttttgacgt | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tggagagtgt | gtactgaaac | 5040 |
| tcattctctc | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtgggtg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctgtt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcattctacg | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatggt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtgggtg | aacatgtaca | tcgcggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcattggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaacaaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gacctgtgcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttag | aggtcaatgc | caaactgact | gttttttacac | aaatctcctt | 6420 |
| aaggtcagt | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttggggttgt | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tattttttgta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcatt | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tattttctggg | aggggtgaatt | gggtgataag | 6960 |
| tggagggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaactct | tagcaggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgcccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgttaatgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaa | cacagtattt | attgcatcaa | atatgtacca | caagaaatgt | agagtgaag | 7380 |
| ctttacacag | gtaataaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagt | gtaaagtcaa | ggaaattggt | caacagatct | catttattta | 7560 |
| agtcattaag | caatagtgtg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaatata | aatactgtaa | aaagtcactt | 7740 |
| tattttat | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaaactaat | aaagattaca | ttttttattt | t | | 8381 |

<210> 12
 <211> 8381
 <212> DNA
 <213> homo sapiens

| | |
|------------|--|
| <400> 12 | |
| atactgcaga | ggctcttggt gcatgtgtgt atgtgtgctt ttgtgtgtgt ttgtgtgtct 60 |
| gtgtgttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgaggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga 480 |
| tgggtgacga | gcccctggag gacctggacc cctactatat caataagaaa actttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |
| tgctaattat | gtgcactatt ttgacaaaact gtgtgtttat gacaatgagt aaccctcctg 720 |
| attggacaaa | gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa 780 |
| aaattattgc | aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact 840 |
| ggctcgattt | cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg 900 |
| tctcggcatt | gagaacattc agagttctcc gagcattgaa gacgatttca gtcattccag 960 |
| gcctgaaaac | cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga 1020 |
| tcctgactgt | gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca 1080 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|------------|------------|-------------|------|
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| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaat | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttggg | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttggtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagagggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaaa | catgttgtca | acctgggtgt | gatggacca | tttggtgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcc | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcatcggcaa | ttccgtgggg | gctctgggaa | 2940 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtggt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
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| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaaac | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
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| aagaaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
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| tcaaattctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
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| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
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| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tggagagtgt | gtactgaaac | 5040 |
| tcattctctt | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggcca | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcattctacg | catctttggg | atgtccaact | 5340 |
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| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
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| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gacctgtgcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
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| ttgggggtgt | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
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Updated Seq Listing2.ST25.txt

| | | | | | | |
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| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcag | agggcagct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggaggtgct | ttgttgatct | tgTTTTgcga | aatccagccc | ctagaccaag | tagattatTT | 7020 |
| gtgggtaggc | cagtaaact | tagcaggtgc | aaacttcatt | caaagtTTTg | gagtcataaa | 7080 |
| tgTtatgttt | ctTTTTgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgccccTcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaattTc | TgctTTTTcc | 7200 |
| TgcactTtTg | Ttagccatct | Ttgggctctc | agcaaggTtg | acactgtata | Tgttaatgaa | 7260 |
| atgctatTTa | Ttatgtaaat | agtcattTTa | ccctgtggTg | cacgtTtgag | caaacaaata | 7320 |
| atgacctaaG | cacagtatTT | attgcatcaa | atatgtacca | caagaaatgt | agagtgcagg | 7380 |
| ctttacacag | gtaataaaaT | gtattctgta | ccatttatag | atagTttgga | Tgctatcaat | 7440 |
| gcatgtTtat | attaccatgc | Tgctgtatct | ggTttctctc | actgctcaga | atctcatTTa | 7500 |
| Tgagaaacca | tatgtcagTg | gtaaagtcaa | ggaaattgtt | caacagatct | catttattTTa | 7560 |
| agtcattaag | caatagtTtg | cagcactTTa | acagctTTTT | ggTtattTTT | acattTTaag | 7620 |
| Tggataacat | atggtatata | gccagactgt | acagacatgt | Ttaaaaaaac | acactgctTa | 7680 |
| acctattaaa | tatgtgtTTa | gaattTTata | agcaaatata | aatactgtaa | aaagtcactT | 7740 |
| tattttatTT | Ttcagcatta | Tgtacataaa | tatgaagagg | aaattatctT | caggTtgata | 7800 |
| Tcacaatcac | TTTTcttact | Ttctgtccat | agtactTTTT | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagTtgt | agattTctgc | TTTTtaaatt | acattTgcta | 7920 |
| attTtagatt | attTcacaat | Tttaaggagc | aaaataggTt | cacgattcat | atccaaatta | 7980 |
| TgctTtgcaa | Ttggaaaagg | gtTtaaaatt | Ttatttatat | Ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagTgct | tatgttatTT | TtgtTctTTT | TTTctgactT | cggTttatgt | 8100 |
| TTTcatTTct | Ttgaggtaat | gctgctctag | attgtTctaa | atagaatgtg | ggctTcataa | 8160 |
| TTTTTTTTTc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacattTT | 8220 |
| gtgtTtctTa | cagaagcaaa | ccataggctc | ctctTTTcct | Taaaactact | tagataaaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | Taaataatgc | Taaccaacat | 8340 |
| Ttaaaatgtg | caaaactaat | aaagattaca | TTTTtatTT | T | | 8381 |

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 <213> homo sapiens
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Updated Seq Listing2.ST25.txt

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| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctctcttttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg | 240 |
| gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg | 300 |
| acagcttcaa cttcttcacc agagaatctc ttgcggtctat tgaaagacgc attgcagaag | 360 |
| aaaaggcaaa gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa | 420 |
| atagtgactt ggaagctgga aagaaccttc catttattta tggagacatt cctccagaga | 480 |
| tgggtgtcaga gcccctggag gacctggacc cctactatat caataagaaa actttttatag | 540 |
| tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa | 600 |
| ctcccttcaa tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca | 660 |
| tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aacctctctg | 720 |
| attggacaaa gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa | 780 |
| aaattattgc aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact | 840 |
| ggctcgattt cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg | 900 |
| tctcggcatt gagaacattc agagtctcc gagcattgaa gacgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaatttg gctgcagctg ttcatgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttgag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggttttttag | 1260 |
| atgcactact atgtggaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |
| tctacctaataa aaatttgatc ctggctgtgg tggccatggc ctacgaggaa cagaatcagg | 1560 |
| ccaccttgga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta | 1620 |
| aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag | 1680 |
| agcccagtgc agcaggcagg ctctcagaca gctcatctga agcctctaag ttgagttcca | 1740 |
| agagtgctaa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg | 1800 |
| gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga | 1860 |
| aagggttttcg cttctccatt gaagggaacc gattgacata tgaaaagagg tactcctccc | 1920 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaaggatcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaag | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcatcggaac | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtgggtcggc | atgcagctct | 3000 |
| ttggtaaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggg | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgacg | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaatttaaac | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
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Updated Seq Listing2.ST25.txt

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| tccgaatagt tgaacataac tggtttgaga ccttcattgt tttcatgatt ctccttagta | 3960 |
| gtggtgctct ggcatttgaa gatatatata ttgatcagcg aaagacgatt aagacgatgt | 4020 |
| tggaatatgc tgacaagggt ttcacttaca ttttcattct ggaaatgctt ctaaaatggg | 4080 |
| tggcatatgg ctatcaaaca tatttcacca atgcctggtg ttggctggac ttcttaattg | 4140 |
| ttgatgtttc attggtcagt ttaacagcaa atgccttggg ttactcagaa cttggagcca | 4200 |
| tcaaactctc caggacacta agagctctga gacctctaag agccttatct cgatttgaag | 4260 |
| ggatgagggg ggttgtgaat gcccttttag gagcaattcc atccatcatg aatgtgcttc | 4320 |
| tggtttgtct tatattctgg ctaattttca gcatcatggg cgtaaatttg tttgctggca | 4380 |
| aattctacca ctgtattaac accacaactg gtgacagggt tgacatcgaa gacgtgaata | 4440 |
| atcatactga ttgcctaaaa ctaatagaaa gaaatgagac tgctcgatgg aaaaatgtga | 4500 |
| aagtaaactt tgataatgta ggatttgggt atctctcttt gcttcaagtt gccacattca | 4560 |
| aaggatggat ggatataatg tatgcagcag ttgattccag aaatgtggaa ctccagccta | 4620 |
| agtatgaaaa aagtctgtac atgtatcttt actttgttat tttcatcatc tttgggtcct | 4680 |
| tcttcacctt gaacctgttt attggtgtca tcatagataa tttcaaccag cagaaaaaga | 4740 |
| agtttggagg tcaagacatc tttatgacag aagaacagaa gaaatactat aatgcaatga | 4800 |
| aaaaattagg atcgaaaaaa ccgcaaaagc ctatacctcg accaggaaac aaatttcaag | 4860 |
| gaatgggtctt tgacttcgta accagacaag tttttgacat aagcatcatg attctcatct | 4920 |
| gtcttaacat ggtcacaatg atggtggaaa cagatgacca gagtgaatat gtgactacca | 4980 |
| ttttgtcacg catcaatctg gtgttcattg tgctatttac tggagagtgt gtactgaaac | 5040 |
| tcattctctc acgccattat tattttacca ttggatggaa tatttttgat tttgtggttg | 5100 |
| tcattctctc cattgtaggt atgtttcttg ccgagctgat agaaaagtat ttcgtgtccc | 5160 |
| ctacctgtt ccgagtgatc cgtcttgcta ggattggccg aatcctacgt ctgatcaaag | 5220 |
| gagcaaaggg gatccgcacg ctgctctttg ctttgatgat gtcccttcct gcgttgttta | 5280 |
| acatcggcct cctactcttc ctagtcatgt tcattctacg catctttggg atgtccaact | 5340 |
| ttgcctatgt taagagggaa gttgggatcg atgacatgtt caacgttgag acctttggca | 5400 |
| acagcatgat ctgcctattc caaattacaa cctctgctgg ctgggatgga ttgctagcac | 5460 |
| ccattctcaa cagtaagcca cccgactgtg accctaataa agttaaccct ggaagctcag | 5520 |
| ttaagggaga ctgtgggaac ccatctgttg gaattttctt tttgtcagt tacatcatca | 5580 |
| tatccttcct ggttgtggtg aacatgtaca tcgcggtcat cctggagaac ttcagtgttg | 5640 |
| ctactgaaga aagtgcagag cctctgagtg aggatgactt tgagatgttc tatgaggttt | 5700 |

Updated Seq Listing2.ST25.txt

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| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcc | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttag | aggtcaatgc | caaactgact | gtttttacac | aaatctcctt | 6420 |
| aagggtcagt | cctacaataa | gacagtgacc | ccttgctcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttgggggtgt | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatttttgta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcatg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggagggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaatct | tagcagggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgcccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgttaatgaa | 7260 |
| atgctatttta | ttatgtaa | agtcatttta | ccctgtggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaa | cacagtat | attgcatcaa | atatgtacca | caagaaatgt | agagtgaag | 7380 |
| ctttacacag | gtaataaaa | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagt | gtaaagtcaa | ggaaattgtt | caacagatct | cattttattta | 7560 |

Updated Seq Listing2.ST25.txt

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| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaataata | aatactgtaa | aaagtcactt | 7740 |
| tattttatTT | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | cagggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtactTTTT | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgt | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttatTT | t | | 8381 |

<210> 14
 <211> 8381
 <212> DNA
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| gtgtgttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctctgtcttg ggtgatgctg 180 |
| ttcttacttg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
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| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc catttatTTa tggagacatt cctccagaga 480 |
| tggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa actttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |
| tgctaattat | gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg 720 |
| attggacaaa | gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa 780 |
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Updated Seq Listing2.ST25.txt

| | |
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| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtcctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggtttttttag | 1260 |
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| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |
| tctacctaataa aaatttgatc ctggctgtgg tggccatggc ctacgaggaa cagaatcagg | 1560 |
| ccaccttggga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta | 1620 |
| aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag | 1680 |
| agcccagtgac agcaggcagg ctctcagaca gctcatctga agcctctaag ttgagttcca | 1740 |
| agagtgcctaa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg | 1800 |
| gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga | 1860 |
| aagggttttcg cttctccatt gaaggggaacc gattgacata tgaaaagagg tactcctccc | 1920 |
| cacaccagtc tttgttgagc atccgtggct ccctattttc accaaggcga aatagcagaa | 1980 |
| caagcctttt cagctttaga gggcgagcaa aggatgtggg atctgagaac gacttcgcag | 2040 |
| atgatgagca cagcaccttt gaggataacg agagccgtag agattccttg tttgtgcccc | 2100 |
| gacgacacgg agagagacgc aacagcaacc tgagtcagac cagtaggtca tcccggatgc | 2160 |
| tggcagtgtt tccagcgaat gggaagatgc acagcactgt ggattgcaat ggtgtggttt | 2220 |
| ccttggttgg tggaccttca gttcctacat cgctgttgg acagcttctg ccagaggtga | 2280 |
| taatagataa gccagctact gatgacaatg gaacaaccac tgaaactgaa atgagaaaga | 2340 |
| gaagggtcaag ttctttccac gtttccatgg actttctaga agatccttcc caaaggcaac | 2400 |
| gagcaatgag tatagccagc attctaacia atacagtaga agaacttgaa gaatccaggc | 2460 |
| agaaatgccc accctgttgg tataaatttt ccaacatatt cttaatctgg gactgttctc | 2520 |
| catattggtt aaaagtgaat catgttgtca acctggttgt gatggacca tttgttgacc | 2580 |
| tggccatcac catctgtatt gtcttaaata ctcttttcat ggccatggag cactatccaa | 2640 |
| tgacggacca tttcaataat gtgcttacag taggaaactt ggttttcact gggatcttta | 2700 |
| cagcagaaat gtttctgaaa attattgcca tggatcctta ctattatttc caagaaggct | 2760 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|------------|-------------|------------|------------|------|
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctggt | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaatatg | ctaataaaga | tcacgaggaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcgatgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tgccatatgg | ctatcaaaca | tatttcacca | atgcctgggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaactctc | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|-------------|------------|------------|-------------|------------|------|
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tgagagagtgt | gtactgaaac | 5040 |
| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctgtt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcactctacg | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatgtt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccatttctca | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtggtg | aacatgtaca | tcacggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgagggtt | 5700 |
| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtagccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggctt | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttagg | aggtcaatgc | caaactgact | gttttttacac | aaatctcctt | 6420 |
| aagggtcagt | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttgggggttgt | ttaacatgaa | acacttttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtgg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatTTTTgtA | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcAtg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggaggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattatTT | 7020 |
| gtgggtaggc | cagtaaAtct | tagcaggTgc | aaacttcatt | caaAtgtttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaaggttg | acactgtata | tgTTaatgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtggTg | cacgtttgag | caaacaata | 7320 |
| atgacctaag | cacagtatTT | attgcatcaa | atatgtacca | caagaaatgt | agagtgcAag | 7380 |
| ctttacacag | gtaataaaaT | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagtg | gtaaagTcaa | ggaaattgtt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttatTTTT | acattttaag | 7620 |
| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaataata | aatactgtaa | aaagtcactt | 7740 |
| tattttatTT | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttatTT | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaaactaat | aaagattaca | ttttttatTT | t | | 8381 |

Updated Seq Listing2.ST25.txt

<210> 15
 <211> 8380
 <212> DNA
 <213> homo sapiens

<400> 15
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 gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120
 ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctgctctttg ggtgatgctg 180
 ttcctcactg cagatggata attttccttt taatcaggaa tttcatatgc agaataaatg 240
 gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtagca ccaggacctg 300
 acagctcaac ttcttcacca gagaatctct tgcggctatt gaaagacgca ttgcagaaga 360
 aaaggcaaag aatcccaaac cagacaaaaa agatgacgac gaaaatggcc caaagccaaa 420
 tagtgacttg gaagctggaa agaaccttcc atttatttat ggagacattc ctccagagat 480
 ggtgtcagag cccctggagg acctggaccc ctactatata aataagaaaa cttttatagt 540
 attgaataaa ttgaaggcca tcttccggtt cagtgccacc tctgccctgt acattttaac 600
 tcccttcaat cctcttagga aaatagctat taagattttg gtacattcat tattcagcat 660
 gctaattatg tgcactatct tgacaaactg tgtgtttatg acaatgagta accctcctga 720
 ttggacaaaag aatgtagaat acaccttcac aggaatatat acttttgaat cacttataaa 780
 aattattgca aggggattct gtttagaaga ttttactttc cttcgggatc catggaactg 840
 gctcgatttc actgtcatta catttgcgta cgtcacagag ttgtgtggacc tgggcaatgt 900
 ctcggcattg agaacattca gagttctccg agcattgaag acgatttcag tcattccagg 960
 cctgaaaacc attgtgggag ccctgatcca gtctgtgaag aagctctcag atgtaatgat 1020
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 acgtgctgct gggaaaacgt acatgatatt ttttgtattg gtcattttct tgggctcatt 1500
 ctacctaata aatttgatcc tggctgtggt ggccatggcc tacgaggaac agaatacaggc 1560
 caccttgga gaagcagaac agaaagaggc cgaatttcag cagatgattg aacagcttaa 1620
 aaagcaacag gaggcagctc agcaggcagc aacggcaact gcctcagaac attccagaga 1680

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| gcccagtgca | gcaggcaggc | tctcagacag | ctcatctgaa | gcctctaagt | tgagttccaa | 1740 |
| gagtgcctaag | gaaagaagaa | atcggaggaa | gaaaagaaaa | cagaaagagc | agtctggtgg | 1800 |
| ggaagagaaa | gatgaggatg | aattccaaaa | atctgaatct | gaggacagca | tcaggaggaa | 1860 |
| aggttttcgc | ttctccattg | aagggaaaccg | attgacatat | gaaaagaggt | actcctcccc | 1920 |
| acaccagtct | ttgttgagca | tccgtggctc | cctattttca | ccaaggcgaa | atagcagaac | 1980 |
| aagccttttc | agcttttagag | ggcgagcaaa | ggatgtggga | tctgagaacg | acttcgcaga | 2040 |
| tgatgagcac | agcacctttg | aggataacga | gagccgtaga | gattccttgt | ttgtgccccg | 2100 |
| acgacacgga | gagagacgca | acagcaacct | gagtcagacc | agtaggtcat | cccggatgct | 2160 |
| ggcagtgttt | ccagcgaatg | ggaagatgca | cagcactgtg | gattgcaatg | gtgtgggtttc | 2220 |
| cttggttggt | ggaccttcag | ttcctacatc | gcctgttgga | cagcttctgc | cagaggtgat | 2280 |
| aatagataag | ccagctactg | atgacaatgg | aacaaccact | gaaactgaaa | tgagaaagag | 2340 |
| aagggtcaagt | tctttccacg | tttccatgga | ctttctagaa | gattccttccc | aaaggcaacg | 2400 |
| agcaatgagt | atagccagca | ttctaacaaa | tacagtagaa | gaacttgaag | aatccaggca | 2460 |
| gaaatgcccc | ccctgttggt | ataaattttc | caacatattc | ttaatctggg | actgttctcc | 2520 |
| atattgggta | aaagtgaaac | atgttgtcaa | cctgggtgtg | atggacccat | ttgttgacct | 2580 |
| ggccatcacc | atctgtattg | tcttaaatac | tcttttcatg | gccatggagc | actatccaat | 2640 |
| gacggacccat | ttcaataatg | tgcttacagt | aggaaacttg | gttttctactg | ggatctttac | 2700 |
| agcagaaaatg | tttctgaaaa | ttattgccat | ggatccttac | tattatttcc | aagaaggctg | 2760 |
| gaatatcttt | gacggtttta | ttgtgacgct | tagcctggta | gaacttggac | tcgccaatgt | 2820 |
| ggaaggatta | tctgttctcc | gttcatttcg | attgctgcga | gttttcaagt | tggcaaaatc | 2880 |
| ttggccaacg | ttaaataatg | taataaagat | catcggcaat | tccgtggggg | ctctgggaaa | 2940 |
| tttaaccctc | gtcttgacca | tcacgtctt | catttttgcc | gtggtcggca | tgcagctctt | 3000 |
| tggtaaaagc | tacaaagatt | gtgtctgcaa | gatcgccagt | gattgtcaac | tcccacgctg | 3060 |
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| tgatctaaac | aacaagaaaag | acagttgtat | gtccaatcat | acaacagaaa | ttgggaaaga | 3480 |
| tcttgactat | cttaaagatg | taaatggaac | tacaagtggg | ataggaactg | gcagcagtgt | 3540 |
| tgaaaaatac | attattgatg | aaagtgatta | catgtcattc | ataaacaacc | ccagtcttac | 3600 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
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| tagtagtgaa tcggatctgg aagaaagcaa agagaaactg aatgaaagca gtagctcatc | 3720 |
| agaaggtagc actgtggaca tcggcgcacc tgtagaagaa cagcccgtag tggaacctga | 3780 |
| agaaactctt gaaccagaag cttgtttcac tgaaggctgt gtacaaagat tcaagtgttg | 3840 |
| tcaaatcaat gtggaagaag gcagaggaaa acaatggtgg aacctgagaa ggacgtgttt | 3900 |
| ccgaatagtt gaacataact ggtttgagac cttcattgtt ttcattgattc tccttagtag | 3960 |
| tggtgctctg gcatttgaag atatatatat tgatcagcga aagacgatta agacgatgtt | 4020 |
| ggaatatgct gacaaggttt tcacttacat tttcattctg gaaatgcttc taaaatgggt | 4080 |
| ggcatatggc tatcaaact atttcaccaa tgcctggtgt tggctggact tcttaattgt | 4140 |
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| caaatctctc aggacactaa gagctctgag acctctaaga gccttatctc gatttgaagg | 4260 |
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| gtatgaaaaa agtctgtaca tgtatcttta ctttgttatt ttcattcatc ttgggtcctt | 4680 |
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| gtttggaggt caagacatct ttatgacaga agaacagaag aaatactata atgcaatgaa | 4800 |
| aaaattagga tcgaaaaaac cgcaaaagcc tatacctcga ccaggaaaca aatttcaagg | 4860 |
| aatggtcttt gacttcgtaa ccagacaagt ttttgacata agcatcatga ttctcatctg | 4920 |
| tcttaacatg gtcacaatga tgggtggaac agatgaccag agtgaatatg tgactaccat | 4980 |
| tttgtcacgc atcaatctgg tgttcattgt gctatttact ggagagtgtg tactgaaact | 5040 |
| catctctcta cgccattatt attttaccat tggatggaat atttttgatt ttgtggttgt | 5100 |
| cattctctcc attgtaggta tgtttcttgc cgagctgata gaaaagtatt tcgtgtcccc | 5160 |
| taccctgttc cgagtgatcc gtcttgctag gattggccga atcctacgtc tgatcaaagg | 5220 |
| agcaaagggg atccgcacgc tgctctttgc tttgatgatg tcccttcctg cgttgtttaa | 5280 |
| catcggcctc ctactcttcc tagtcatgtt catctacgcc atctttggga tgtccaactt | 5340 |
| tgcctatgtt aagaggggaag ttgggatcga tgacatgttc aactttgaga cttttggcaa | 5400 |
| cagcatgatc tgcctattcc aaattacaac ctctgctggc tgggatggat tgctagcacc | 5460 |

Updated Seq Listing2.ST25.txt

| | |
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| cattctcaac agtaagccac ccgactgtga ccctaataaa gttaaccctg gaagctcagt | 5520 |
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| atccttcctg gttgtggtga acatgtacat cgcggtcatc ctggagaact tcagtgttgc | 5640 |
| tactgaagaa agtgcagagc ctctgagtga ggatgacttt gagatgttct atgaggtttg | 5700 |
| ggagaagttt gatccccgatg caactcagtt catggaattt gaaaaattat ctcagtttgc | 5760 |
| agctgcgctt gaaccgcctc tcaatctgcc acaaccaaac aaactccagc tcattgccat | 5820 |
| ggatttgccc atggtgagtg gtgaccggat ccactgtctt gatatcttat ttgcttttac | 5880 |
| aaagcgggtt ctaggagaga gtggagagat ggatgctcta cgaatacaga tggaagagcg | 5940 |
| attcatggct tccaatcctt ccaaggctct ctatcagcca atcactacta ctttaaaacg | 6000 |
| aaaacaagag gaagtatctg ctgtcattat tcagcgtgct tacagacgcc accttttaa | 6060 |
| gcgaactgta aaacaagctt cttttacgta caataaaaac aaaatcaaag gtggggctaa | 6120 |
| tcttcttata aaagaagaca tgataattga cagaataaat gaaaactcta ttacagaaaa | 6180 |
| aactgatctg accatgtcca ctgcagcttg tccaccttcc tatgaccggg tgacaaagcc | 6240 |
| aattgtggaa aaacatgagc aagaaggcaa agatgaaaaa gccaaaggga aataaatgaa | 6300 |
| aataaataaa aataattggg tgacaaattg tttacagcct gtgaagggtga tgtattttta | 6360 |
| tcaacaggac tccttttagga ggtcaatgcc aaactgactg tttttacaca aatctcctta | 6420 |
| aggtcagtgc ctacaataag acagtgacct cttgtcagca aactgtgact ctgtgtaaag | 6480 |
| gggagatgac cttgacagga ggttactgtt ctactacca gctgacactg ctgaagataa | 6540 |
| gatgcacaat ggctagtcag actgtagggg ccagtttcaa ggggtgcaaa cctgtgattt | 6600 |
| tggggttgtt taacatgaaa cacttttagt tagtaattgt atccactgtt tgcatttcaa | 6660 |
| ctgccacatt tgtcacattt ttatggaatc tgttagtgga ttcattttt tgttaatcca | 6720 |
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| caaagtcgtg gtttgcatga gggcatgctg cacttagaga tcatgcatga gaaaaagtca | 6900 |
| caagaaaaac aaattcttaa atttcacat atttctggga ggggtaattg ggtgataagt | 6960 |
| ggagggtgctt tgttgatctt gttttgcgaa atccagcccc tagaccaagt agattatttg | 7020 |
| tgggtaggcc agtaaattctt agcagggtga aacttcattc aaatgttttg agtcataaat | 7080 |
| gttatgtttc tttttgttgt attaaaaaaa aaacctgaat agtgaatatt gcccctcacc | 7140 |
| ctccaccgcc agaagactga attgacaaa attactcttt ataaatttct gctttttcct | 7200 |
| gcactttgtt tagccatctt tgggctctca gcaagggtga cactgtatat gttaatgaaa | 7260 |
| tgctatttat tatgtaaata gtcattttac cctgtggtgc acgtttgagc aaacaaataa | 7320 |
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Updated Seq Listing2.ST25.txt

| | | | | | | |
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| catgtttata | ttaccatgct | gctgtatctg | gtttctctca | ctgctcagaa | tctcatttat | 7500 |
| gagaaaccat | atgtcagtg | taaagtcaag | gaaattgttc | aacagatctc | atttatttaa | 7560 |
| gtcattaagc | aatagtttgc | agcactttaa | cagctttttg | gttattttta | cattttaagt | 7620 |
| ggataacata | tggtatatag | ccagactgta | cagacatgtt | taaaaaaaca | cactgcttaa | 7680 |
| cctattaaat | atgtgttttag | aattttataa | gcaaataata | atactgtaaa | aagtcacttt | 7740 |
| attttatttt | tcagcattat | gtacataaat | atgaagagga | aattatcttc | aggttgatat | 7800 |
| cacaatcact | tttcttactt | tctgtccata | gtactttttc | atgaaagaaa | tttgctaaat | 7860 |
| aagacatgaa | aacaagactg | ggtagttgta | gatttctgct | ttttaaatta | catttgctaa | 7920 |
| ttttagatta | tttcacaatt | ttaaggagca | aaatagggtc | acgattcata | tccaaattat | 7980 |
| gctttgcaat | tggaaaaggg | tttaaaat | tatttatatt | tctggtagta | cctgtactaa | 8040 |
| ctgaattgaa | ggtagtgtct | atgttatttt | tggtcttttt | ttctgacttc | ggtttatgtt | 8100 |
| ttcatttctt | tggagtaatg | ctgctctaga | ttgttctaaa | tagaatgtgg | gcttcataat | 8160 |
| ttttttttcc | acaaaaacag | agtagtcaac | ttatatagtc | aattacatca | ggacattttg | 8220 |
| tgtttcttac | agaagcaaac | cataggctcc | tcttttcctt | aaaactactt | agataaactg | 8280 |
| tattcgtgaa | ctgcatgctg | gaaaatgcta | ctattatgct | aaataatgct | aaccaacatt | 8340 |
| taaaatgtgc | aaaactaata | aagattacat | tttttatttt | | | 8380 |

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 <211> 8388
 <212> DNA
 <213> homo sapiens

| | |
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| <400> 16 | |
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| gtgtgttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctctgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc catttattta tggagacatt cctccagaga 480 |
| tggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa acttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tagtgaatcc | ttttgaatca | 780 |
| cttataaaaa | ttattgcaag | gggattctgt | ttagaagatt | ttactttcct | tcgggatcca | 840 |
| tggaaactggc | tcgatttcac | tgtcattaca | tttgcgtagc | tcacagagtt | tgtggacctg | 900 |
| ggcaatgtct | cggcattgag | aacattcaga | gttctccgag | cattgaagac | gatttcagtc | 960 |
| attccaggcc | tgaaaacat | tgtgggagcc | ctgatccagt | ctgtgaagaa | gctctcagat | 1020 |
| gtaatgatcc | tgactgtgtt | ctgtctgagc | gtatttgctc | taattgggct | gcagctgttc | 1080 |
| atgggcaacc | tgaggaataa | atgtatacaa | tggcctccca | ccaatgcttc | cttgaggagaa | 1140 |
| catagtatag | aaaagaatat | aactgtgaat | tataatggta | cacttataaa | tgaaactgtc | 1200 |
| tttgagtttg | actggaagtc | atatattcaa | gattcaagat | atcattatct | cctggagggt | 1260 |
| tttttagatg | cactactatg | tggaaatagc | tctgatgcag | gccaatgtcc | agagggatat | 1320 |
| atgtgtgtga | aagctggtag | aaatcccaat | tatggctaca | caagctttga | taccttcagt | 1380 |
| tgggcttttt | tgtccttggt | tcgactaatg | actcaggact | tctgggaaaa | tctttatcaa | 1440 |
| ctgacattac | gtgctgctgg | gaaaacgtac | atgatatttt | ttgtattggt | cattttcttg | 1500 |
| ggctcattct | acctaataaa | tttgatcctg | gctgtggtgg | ccatggccta | cgaggaacag | 1560 |
| aatcaggcca | ccttggaaga | agcagaacag | aaagaggccg | aatttcagca | gatgattgaa | 1620 |
| cagcttaaaa | agcaacagga | ggcagctcag | caggcagcaa | cggcaactgc | ctcagaacat | 1680 |
| tccagagagc | ccagtgcagc | aggcaggctc | tcagacagct | catctgaagc | ctctaagttg | 1740 |
| agttccaaga | gtgctaagga | aagaagaaat | cggaggaaga | aaagaaaaca | gaaagagcag | 1800 |
| tctggtgggg | aagagaaaga | tgaggatgaa | ttccaaaaat | ctgaatctga | ggacagcatc | 1860 |
| aggaggaaag | gttttcgctt | ctccattgaa | gggaaccgat | tgacatatga | aaagagggtac | 1920 |
| tcctccccac | accagtcttt | gttgagcatc | cgtggctccc | tattttcacc | aaggcgaaat | 1980 |
| agcagaacaa | gccttttcag | ctttagaggg | cgagcaaagg | atgtgggatc | tgagaacgac | 2040 |
| ttcgagatg | atgagcacag | cacctttgag | gataacgaga | gccgtagaga | ttccttggtt | 2100 |
| gtgccccgac | gacacggaga | gagacgcaac | agcaacctga | gtcagaccag | taggtcatcc | 2160 |
| cggatgctgg | cagtgtttcc | agcgaatggg | aagatgcaca | gcactgtgga | ttgcaatggt | 2220 |
| gtggtttcct | tggttggtgg | accttcagtt | cctacatcgc | ctgttgga | gcttctgcca | 2280 |
| gagggtgataa | tagataagcc | agctactgat | gacaatggaa | caaccactga | aactgaaatg | 2340 |
| agaaagagaa | ggtcaagttc | tttcacggtt | tccatggact | ttctagaaga | tccttcccaa | 2400 |
| aggcaacgag | caatgagtat | agccagcatt | ctaacaataa | cagtagaaga | acttgaagaa | 2460 |
| tccaggcaga | aatgcccacc | ctgttggtat | aaattttcca | acatattctt | aatctgggac | 2520 |

Updated Seq Listing2.ST25.txt

| | |
|---|------|
| tggttctccat attgggttaaa agtgaaacat gttgtcaacc tggttgtgat ggacccattt | 2580 |
| gttgacctgg ccatcaccat ctgtattgtc ttaaatactc ttttcatggc catggagcac | 2640 |
| tatccaatga cggaccattt caataatgtg cttacagtag gaaacttggt tttcactggg | 2700 |
| atctttacag cagaaatgtt tctgaaaatt attgccatgg atccttacta ttattttcaa | 2760 |
| gaaggctgga atatctttga cggttttatt gtgacgctta gcctggtaga acttggactc | 2820 |
| gccaatgtgg aaggattatc tggttctcgt tcatttcgat tgctgcgagt tttcaagttg | 2880 |
| gcaaaaatctt ggccaacgtt aaatatgcta ataaagatca tcggcaattc cgtgggggct | 2940 |
| ctgggaaaatt taaccctcgt cttggccatc atcgtcttca tttttgccgt ggtcggcatg | 3000 |
| cagctctttg gtaaaagcta caaagattgt gtctgcaaga tcgccagtga ttgtcaactc | 3060 |
| ccacgctggc acatgaatga cttcttcac tccttcctga ttgtgttccg cgtgctgtgt | 3120 |
| ggggagtgga tagagaccat gtgggactgt atggaggttg ctggtcaagc catgtgcctt | 3180 |
| actgtcttca tgatggatcat ggtgattgga aacctagtgg tcctgaatct ctttctggcc | 3240 |
| ttgcttctga gctcatttag tgcagacaac cttgcagcca ctgatgatga taatgaaatg | 3300 |
| aataatctcc aaattgctgt ggataggatg cacaaggag tagcttatgt gaaaagaaaa | 3360 |
| atatatgaat ttattcaaca gtccttcatt aggaacaaa agattttaga tgaaattaaa | 3420 |
| ccacttgatg atctaataca caagaaagac agttgtatgt ccaatcatac aacagaaatt | 3480 |
| gggaaagatc ttgactatct taaagatgta aatggaacta caagtggat aggaactggc | 3540 |
| agcagtgttg aaaaatacat tattgatgaa agtgattaca tgtcattcat aaacaacccc | 3600 |
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| gaacctgaag aaactcttga accagaagct tgtttctactg aaggctgtgt acaaagattc | 3840 |
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Updated Seq Listing2.ST25.txt

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| aatgtgaaag | taaactttga | taatgtagga | tttgggtatc | tctctttgct | tcaagttgcc | 4560 |
| acattcaaag | gatggatgga | tataatgtat | gcagcagttg | attccagaaa | tgtggaactc | 4620 |
| cagcctaagt | atgaaaaaag | tctgtacatg | tatctttact | ttgttatttt | catcatcttt | 4680 |
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| tttcaaggaa | tggctcttga | cttcgtaacc | agacaagttt | ttgacataag | catcatgatt | 4920 |
| ctcatctgtc | ttaacatggg | cacaatgatg | gtggaaacag | atgaccagag | tgaatatgtg | 4980 |
| actaccat | ttgtcacgcat | caatctgggt | ttcattgtgc | tatttactgg | agagtgtgta | 5040 |
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| gtggttgtca | ttctctccat | tgtaggtatg | tttcttgccg | agctgataga | aaagtatttc | 5160 |
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| ggggctaatac | ttcttataaa | agaagacatg | ataattgaca | gaataaatga | aaactctatt | 6180 |
| acagaaaaaa | ctgatctgac | catgtccact | gcagcttgtc | caccttccta | tgaccgggtg | 6240 |
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Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tgataagtgg | aggtgctttg | ttgatcttgt | tttgcgaaat | ccagccccta | gaccaagtag | 7020 |
| attattttgtg | ggtaggccag | taaatcttag | caggtgcaaa | cttcattcaa | atgtttggag | 7080 |
| tcataaatgt | tatgtttctt | tttgttgtat | taaaaaaaaa | acctgaatag | tgaatattgc | 7140 |
| ccctcaccct | ccaccgccag | aagactgaat | tgaccaaagt | tactctttat | aaattttctgc | 7200 |
| tttttcctgc | actttgttta | gccatctttg | ggctctcagc | aaggttgaca | ctgtatatgt | 7260 |
| taatgaaatg | ctatttatta | tgtaaatagt | cattttaccc | tgtggtgcac | gtttgagcaa | 7320 |
| acaaataatg | acctaagcac | agtattttat | gcatcaaata | tgtaccacaa | gaaatgtaga | 7380 |
| gtgcaagctt | tacacaggta | ataaaatgta | ttctgtacca | tttatagata | gtttggatgc | 7440 |
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| ttattttaagt | cattaagcaa | tagtttgcag | cactttaaca | gctttttggg | tattttttaca | 7620 |
| ttttaagtgg | ataacatatg | gtatatagcc | agactgtaca | gacatgttta | aaaaaacaca | 7680 |
| ctgcttaacc | tattaaatat | gtgttttaga | ttttataagc | aaatataaat | actgtaaaaa | 7740 |
| gtcactttat | tttatttttc | agcattatgt | acataaatat | gaagaggaaa | ttatcttcag | 7800 |
| gttgatatca | caatcacttt | tcttactttc | tgtccatagt | actttttcat | gaaagaaatt | 7860 |
| tgctaaataa | gacatgaaaa | caagactggg | tagttgtaga | tttctgcttt | ttaaattaca | 7920 |
| tttgctaatt | ttagattatt | tcacaatttt | aaggagcaaa | ataggttcac | gattcatatc | 7980 |
| caaattatgc | tttgcaattg | gaaaagggtt | taaaatttta | tttatatttc | tggtagtacc | 8040 |
| tgtactaact | gaattgaagg | tagtgcttat | gttatttttg | ttcttttttt | ctgacttcgg | 8100 |
| tttatgtttt | catttctttg | gagtaatgct | gctctagatt | gttctaaata | gaatgtgggc | 8160 |
| ttcataattt | ttttttccac | aaaaacagag | tagtcaactt | atatagtcaa | ttacatcagg | 8220 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| acattttgtg | tttcttacag | aagcaaacca | taggctcctc | ttttccttaa | aactacttag | 8280 |
| ataaactgta | ttcgtgaact | gcatgctgga | aaatgctact | attatgctaa | ataatgctaa | 8340 |
| ccaacattta | aaatgtgcaa | aactaataaa | gattacattt | tttatttt | | 8388 |

<210> 17
 <211> 8380
 <212> DNA
 <213> homo sapiens

| | |
|------------|------|
| <400> 17 | |
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| gtgtgttctg | 120 |
| ggaatctgaa | 180 |
| ttcctcactg | 240 |
| gtaattaaaa | 300 |
| acagcttcaa | 360 |
| aaaaggcaaa | 420 |
| atagtgactt | 480 |
| tggtgtcaga | 540 |
| tattgaataa | 600 |
| ctcccttcaa | 660 |
| tgctaattat | 720 |
| attggacaaa | 780 |
| aaattattgc | 840 |
| ggctcgattt | 900 |
| tctcggcatt | 960 |
| gcctgaaaac | 1020 |
| tcctgactgt | 1080 |
| acctgaggaa | 1140 |
| tagaaaagaa | 1200 |
| ttgactggaa | 1260 |
| atgcactact | 1320 |
| tgaaagctgg | 1380 |
| ttttgtcctt | 1440 |
| tacgtgctgc | 1500 |

Updated Seq Listing2.ST25.txt

| | | |
|--|--|------|
| tctacctaataaatttgatcctggctgtggtggccatggcctacgaggaa | cagaatcagg | 1560 |
| ccaccttggaagaagcagaa | cagaaagaggccgaatttcagcagatgattgaacagctta | 1620 |
| aaaagcaacaggaggcagctcagcaggcagcaacggcaactgcctcagaa | cattccagag | 1680 |
| agcccagtgtagcagaggcaggctctcagacagctcatctgaagcctctaag | ttgagttcca | 1740 |
| agagtgtctaaaggaaagaagaatcggaggagaagaaagaaacagaaagag | cagtctggtg | 1800 |
| gggaagagaaagatgaggatgaattccaaaatctgaatctgaggacagc | atcaggagga | 1860 |
| aagggttttcgcttctccattgaaggaaccgattgacata | tgaaaagagg | 1920 |
| cacaccagtccttgttgagcatccgtggctcctattttcca | ccaaggcgaaatagcagaac | 1980 |
| aagccttttcagcttttagaggcgagcaaggatgtggatctgagaacg | acttcgcaga | 2040 |
| tgatgagcacagcacctttgaggataacgagagccgtagagattccttgt | ttgtgccccg | 2100 |
| acgacacggagagacgcaacagcaacctgagtcagaccagtaggtcat | cccggatgct | 2160 |
| ggcagtggttccagcgaatgggaagatgcacgactgtgattgcaatg | gtgtgggtttc | 2220 |
| cttggttggtggaccttcagttcctacatgcctgttgga | cagcttctgcagaggtgat | 2280 |
| aatagataagccagctactgatgacaatggaacaaccactgaaactgaaa | tgagaaagag | 2340 |
| aagggtcaagtctttccacgtttccatggactttctagaa | gatccttccc | 2400 |
| agcaatgagtagatagccagcatcttaacaaatagtagaagaacttgaag | aatccaggca | 2460 |
| gaaatgccccctctgttggtataaattttccaacatattc | ttaatctggg | 2520 |
| atattgggttaaagtgaaacatgttgtcaacctgggtgtgatggacccat | ttgttgacct | 2580 |
| ggccatcaccatctgtattgtcttaatactcttttcatg | gccatggagc | 2640 |
| gacggaccattcaataatgtgcttacagtaggaaacttg | gttttctactg | 2700 |
| agcagaaatgtttctgaaaaattattgcatggatccttac | tattatttcc | 2760 |
| gaatatctttgacggtttta | ttgtgacgcttagcctggtagaacttggac | 2820 |
| ggaggattatctgttctcgttcatttcgattgctgcga | gttttcaagt | 2880 |
| ttggccaacgttaaataatgctaataaagatcatcggcaat | tccgtggggg | 2940 |
| tttaaccctcgtcttggtgcatcgtcttcatttttgcc | gtggctcggca | 3000 |
| tggtaaaagctacaaagattgtgtctgcaagatcgccagtgattgtcaac | tcccacgctg | 3060 |
| gcacatgaatgacttcttccactccttccgattgtgttc | cgcggtgctgt | 3120 |
| gatagagaccatgtgggactgtatggagggtgctgggtcaa | gccatgtgcc | 3180 |
| catgatggctatggtgattggaaacctagtggtcctgaat | ctctttctgg | 3240 |
| gagctcatctt | agtgagacaccttgacgcactgatgatgataatgaaa | 3300 |
| ccaaattgctgtggatagga | tgcacaaaggagtagcttatgtgaaaagaa | 3360 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tgatctaaac | aacaagaaag | acagttgtat | gtccaatcat | acaacagaaa | ttgggaaaga | 3480 |
| tcttgactat | cttaaagatg | taaatggaac | tacaagtggg | ataggaactg | gcagcagtgt | 3540 |
| tgaaaaatac | attattgatg | aaagtgatta | catgtcattc | ataaacaacc | ccagtcttac | 3600 |
| tgtgactgta | ccaattgctg | taggagaatc | tgactttgaa | aatttaaaca | cggaagactt | 3660 |
| tagtagtgaa | tcggatctgg | aagaaagcaa | agagaaactg | aatgaaagca | gtagctcatc | 3720 |
| agaaggtagc | actgtggaca | tcggcgcacc | tgtagaagaa | cagcccgtag | tggaacctga | 3780 |
| agaaactctt | gaaccagaag | cttgtttcac | tgaaggctgt | gtacaaagat | tcaagtgttg | 3840 |
| tcaaataaat | gtggaagaag | gcagaggaaa | acaatggtgg | aacctgagaa | ggacgtgttt | 3900 |
| ccgaatagtt | gaacataact | ggtttgagac | cttcattgtt | ttcatgattc | tccttagtag | 3960 |
| tggtgctctg | gcatttgaag | atatatatat | tgatcagcga | aagacgatta | agacgatgtt | 4020 |
| ggaatatgct | gacaagggtt | tcacttacat | tttcattctg | gaaatgcttc | taaaatgggt | 4080 |
| ggcatatggc | tatcaaaca | atttcaccaa | tgcctgggtg | tggtggact | tcttaattgt | 4140 |
| tgatgtttca | ttggtcagtt | taacagcaaa | tgccttgggt | tactcagaac | ttggagccat | 4200 |
| caaatctctc | aggacactaa | gagctctgag | acctctaaga | gccttatctc | gatttgaagg | 4260 |
| gatgaggggtg | gttgtgaatg | cccttttagg | agcaattcca | tccatcatga | atgtgcttct | 4320 |
| ggtttgtctt | atattctggc | taattttcag | catcatgggc | gtaaatttgt | ttgctggcaa | 4380 |
| attctaccac | tgtattaaca | ccacaactgg | tgacagggtt | gacatcgaag | acgtgaataa | 4440 |
| tcatactgat | tgcctaaaac | taatagaaag | aatgagact | gctcgatgga | aaaatgtgaa | 4500 |
| agtaaacttt | gataatgtag | gatttgggta | tctctctttg | cttcaagttg | ccacattcaa | 4560 |
| aggatggatg | gatataatgt | atgcagcagt | tgattccaga | aatgtggaac | tccagcctaa | 4620 |
| gtatgaaaaa | agtctgtaca | tgtatcttta | ctttgttatt | ttcatcatct | ttgggtcctt | 4680 |
| cttcaccttg | aacctgttta | ttggtgtcat | catagataat | ttcaaccagc | agaaaaagaa | 4740 |
| gtttggaggt | caagacatct | ttatgacaga | agaacagaag | aaatactata | atgcaatgaa | 4800 |
| aaaattagga | tcgaaaaaac | cgcaaaagcc | tatacctcga | ccaggaaaca | aatttcaagg | 4860 |
| aatgggtctt | gacttcgtaa | ccagacaagt | ttttgacata | agcatcatga | ttctcatctg | 4920 |
| tcttaacatg | gtcacaatga | tggtggaaac | agatgaccag | agtgaatatg | tgactaccat | 4980 |
| tttgtcacgc | atcaatctgg | tgttcattgt | gctatttact | ggagagtgtg | tactgaaact | 5040 |
| catctctcta | cgccattatt | attttaccat | tggtatggaat | atttttgatt | ttgtggttgt | 5100 |
| cattctctcc | attgtaggta | tgtttcttgc | cgagctgata | gaaaagtatt | tcgtgtcccc | 5160 |
| taccctgttc | cgagtgatcc | gtcttgctag | gattggccga | atcctacgtc | tgatcaaagg | 5220 |
| agcaaagggg | atccgcacgc | tgctctttgc | tttgatgatg | tcccttcctg | cgttgtttaa | 5280 |

Updated Seq Listing2.ST25.txt

| | |
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| catcggcctc ctactcttcc tagtcatggt catctacgcc atctttggga tgtccaactt | 5340 |
| tgcctatggt aagaggggaag ttgggatcga tgacatgttc aactttgaga cctttggcaa | 5400 |
| cagcatgatc tgcctattcc aaattacaac ctctgctggc tgggatggat tgctagcacc | 5460 |
| cattctcaac agtaagccac ccgactgtga ccctaataaa gttaaccctg gaagctcagt | 5520 |
| taagggagac tgtgggaacc catctgttgg aattttcttt tttgtcagtt acatcatcat | 5580 |
| atccttcctg gttgtggtga acatgtacat cgcggtcata ctggagaact tcagtgttgc | 5640 |
| tactgaagaa agtgcagagc ctctgagtga ggatgacttt gagatgttct atgaggtttg | 5700 |
| ggagaagttt gatcccgatg caactcagtt catggaattt gaaaaattat ctcagtttgc | 5760 |
| agctgcgctt gaaccgcctc tcaatctgcc acaaccaaac aaactccagc tcattgccat | 5820 |
| ggatttgccc atggtgagtg gtgaccgat ccactgtctt gatatcttat ttgcttttac | 5880 |
| aaagcgggtt ctaggagaga gtggagagat ggatgctcta cgaatacaga tggaagagcg | 5940 |
| attcatggct tccaatcctt ccaaggtctc ctatcagcca atcactacta ctttaaaacg | 6000 |
| aaaacaagag gaagtatctg ctgtcattat tcagcgtgct tacagacgcc accttttaaa | 6060 |
| gcgaactgta aaacaagctt cttttacgta caataaaaac aaaatcaaag gtgggggctaa | 6120 |
| tcttcttata aaagaagaca tgataattga cagaataaat gaaaactcta ttacagaaaa | 6180 |
| aactgatctg accatgtcca ctgcagcttg tccaccttcc tatgaccggg tgacaaagcc | 6240 |
| aattgtggaa aaacatgagc aagaaggcaa agatgaaaaa gccaaaggga aataaatgaa | 6300 |
| aataaataaa aataattggg tgacaaattg ttacagcct gtgaagggtga tgtattttta | 6360 |
| tcaacaggac tccttttaga ggtcaatgcc aaactgactg tttttacaca aatctcctta | 6420 |
| aggtcagtgc ctacaataag acagtgacct cttgtcagca aactgtgact ctgtgtaaag | 6480 |
| gggagatgac cttgacagga ggttactgtt ctactacca gctgacactg ctgaagataa | 6540 |
| gatgcacaat ggctagtcag actgtaggga ccagtttcaa ggggtgcaa cctgtgattt | 6600 |
| tgggggttgt taacatgaaa cactttagtg tagtaattgt atccactgtt tgcatttcaa | 6660 |
| ctgccacatt tgtcacattt ttatggaatc tgtagtgga ttcatctttt tgttaatcca | 6720 |
| tgtgtttatt atatgtgact atttttgtaa acgaagtttc tgttgagaaa taggctaagg | 6780 |
| acctctataa caggtatgcc acctgggggg tatggcaacc acatggccct cccagctaca | 6840 |
| caaagtcgtg gtttgcatga gggcatgctg cacttagaga tcatgcatga gaaaaagtca | 6900 |
| caagaaaaac aaattcttaa atttcacat atttctggga ggggtaattg ggtgataagt | 6960 |
| ggagggtgctt tggtgatctt gttttgcgaa atccagcccc tagaccaagt agattatttg | 7020 |
| tgggtaggcc agtaaattct agcaggtgca aacttcattc aaatgtttgg agtcataaat | 7080 |
| gttatgtttc tttttgttgt attaaaaaaa aaacctgaat agtgaatatt gccctcacc | 7140 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| ctccaccgcc | agaagactga | attgaccaaa | attactcttt | ataaatttct | gctttttcct | 7200 |
| gcactttgtt | tagccatctt | tgggctctca | gcaagggtga | caactgtatat | gttaatgaaa | 7260 |
| tgctatttat | tatgtaaata | gtcattttac | cctgtggtgc | acgtttgagc | aaacaaataa | 7320 |
| tgacctaaagc | acagtattta | ttgcatcaaa | tatgtaccac | aagaaatgta | gagtgcaagc | 7380 |
| tttacacagg | taataaaatg | tattctgtac | catttataga | tagtttggat | gctatcaatg | 7440 |
| catgtttata | ttaccatgct | gctgtatctg | gtttctctca | ctgctcagaa | tctcatttat | 7500 |
| gagaaaccat | atgtcagtgg | taaagtcaag | gaaattgttc | aacagatctc | atttatttaa | 7560 |
| gtcattaagc | aatagtttgc | agcactttta | cagctttttg | gttattttta | cattttaagt | 7620 |
| ggataacata | tggtatatag | ccagactgta | cagacatggt | taaaaaaaca | caactgcttaa | 7680 |
| cctattaaat | atgtgttttag | aattttataa | gcaaataata | atactgtaaa | aagtcacttt | 7740 |
| attttatttt | tcagcattat | gtacataaat | atgaagagga | aattatcttc | aggttgatat | 7800 |
| cacaatcact | tttcttactt | tctgtccata | gtactttttc | atgaaagaaa | tttgctaaat | 7860 |
| aagacatgaa | aacaagactg | ggtagtgtga | gatttctgct | ttttaaatta | catttgctaa | 7920 |
| tttttagatta | tttcacaatt | ttaaggagca | aaatagggtc | acgattcata | tccaaattat | 7980 |
| gctttgcaat | tggaagagg | tttaaaat | tatttatatt | tctggtagta | cctgtactaa | 8040 |
| ctgaattgaa | ggtagtgtct | atgttatttt | tggtcttttt | ttctgacttc | ggtttatgtt | 8100 |
| ttcatttctt | tggaagtaag | ctgctctaga | ttgttctaaa | tagaatgtgg | gcttcataat | 8160 |
| ttttttttcc | acaaaaacag | agtagtcaac | ttatatagtc | aattacatca | ggacattttg | 8220 |
| tggttcttac | agaagcaaac | cataggctcc | tcttttcctt | aaaactactt | agataaactg | 8280 |
| tattcgtgaa | ctgcatgctg | gaaaatgcta | ctattatgct | aaataatgct | aaccaacatt | 8340 |
| taaaatgtgc | aaaactaata | aagattacat | tttttatttt | | | 8380 |

<210> 18
 <211> 8380
 <212> DNA
 <213> homo sapiens

| | |
|------------|--|
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| gtgtgttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtagca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|------------|------------|-------------|-------------|------|
| atagtgactt | ggaagctgga | aagaaccttc | catttattta | tggagacatt | cctccagaga | 480 |
| tggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | acttttatag | 540 |
| tattgaataa | attgaaggcc | atcttccggt | tcagtgccac | ctctgccctg | tacattttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | attttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagtctctc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttggag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaat | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttggg | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgacctcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aagggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagcttttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtggt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtgggtt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagagggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|------------|-------------|------------|-------------|------|
| gaagggtcaag | ttctttccac | gtttccatgg | acttttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgtttctc | 2520 |
| catattgggt | aaaagtga | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcc | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tggaaggatt | atctgtttctc | cgttcatttc | gattgtctgc | agttttcaag | ttggcaaaat | 2880 |
| cttgccaac | gttaaatatg | ctaataaaga | tcatcgcaa | ttccgtggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttgcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgatttgtgt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaagatg | taaatggaac | tacaagtggg | ataggaactg | gcagcagtgt | 3540 |
| tgaaaaatac | attattgatg | aaagtgatta | catgtcattc | ataaacaacc | ccagtcttac | 3600 |
| tgtgactgta | ccaattgctg | taggagaatc | tgactttgaa | aatttaaaca | cgaagactt | 3660 |
| tagtagtgaa | tcggatctgg | aagaaagcaa | agagaaactg | aatgaaagca | gtagctcatc | 3720 |
| agaaggtagc | actgtggaca | tcggcgcacc | tgtagaagaa | cagcccgtag | tggaacctga | 3780 |
| agaaactctt | gaaccagaag | cttgtttcac | tgaaggctgt | gtacaaagat | tcaagtgttg | 3840 |
| tcaaatcaat | gtggaagaag | gcagaggaaa | acaatgggtg | aacctgagaa | ggacgtgttt | 3900 |
| ccgaatagtt | gaacataact | ggtttgagac | cttcattgtt | ttcatgattc | tccttagtag | 3960 |
| tggtgctctg | gcatttgaag | atatatatat | tgatcagcga | aagacgatta | agacgatgtt | 4020 |
| ggaatatgct | gacaagggtt | tcacttacat | tttcattctg | gaaatgcttc | taaaatgggt | 4080 |
| ggcatatggc | tatcaaacat | atttcacaa | tgcctgggtg | tggttggtg | tcttaattgt | 4140 |
| tgatgtttca | ttggtcagtt | taacagcaaa | tgccttggtg | tactcagaac | ttggagccat | 4200 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|------------|------------|-------------|------|
| caaatctctc | aggacactaa | gagctctgag | acctctaaga | gccttatctc | gatttgaagg | 4260 |
| gatgaggggtg | gttgtgaatg | cccttttagg | agcaattcca | tccatcatga | atgtgcttct | 4320 |
| ggtttgtctt | atattctggc | taattttcag | catcatgggc | gtaaatttgt | ttgctggcaa | 4380 |
| attctaccac | tgtattaaca | ccacaactgg | tgacaggttt | gacatcgaag | acgtgaataa | 4440 |
| tcatactgat | tgcctaaaac | taatagaaag | aaatgagact | gctcgatgga | aaaatgtgaa | 4500 |
| agtaaacttt | gataatgtag | gatttgggta | tctctctttg | cttcaagttg | ccacattcaa | 4560 |
| aggatggatg | gatataatgt | atgcagcagt | tgattccaga | aatgtggaac | tccagcctaa | 4620 |
| gtatgaaaaa | agtctgtaca | tgtatcttta | ctttgttatt | ttcatcatct | ttgggtcctt | 4680 |
| cttcaccttg | aacctgttta | ttgggtgtcat | catagataat | ttcaaccagc | agaaaaagaa | 4740 |
| gtttggaggt | caagacatct | ttatgacaga | agaacagaag | aaatactata | atgcaatgaa | 4800 |
| aaaattagga | tcgaaaaaac | cgcaaaagcc | tatacctcga | ccaggaaaca | aatttcaagg | 4860 |
| aatggctctt | gacttcgtaa | ccagacaagt | ttttgacata | agcatcatga | ttctcatctg | 4920 |
| tcttaacatg | gtcacaatga | tggtggaaac | agatgaccag | agtgaatatg | tgactaccat | 4980 |
| tttgtcacgc | atcaatctgg | tgttcattgt | gctatttact | ggagagtgtg | tactgaaact | 5040 |
| catctctcta | cgccattatt | attttaccat | tggatggaat | atttttgatt | ttgtggttgt | 5100 |
| cattctctcc | attgtaggta | tgtttcttgc | cgagctgata | gaaaagtatt | tcgtgtcccc | 5160 |
| taccctgttc | cgagtgatcc | gtcttgctag | gattggccga | atcctacgtc | tgatcaaagg | 5220 |
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| catcggcctc | ctactcttcc | tagtcatgtt | catctacgcc | atctttggga | tgtccaactt | 5340 |
| tgcctatgtt | aagaggggaag | ttgggatcga | tgacatgttc | aactttgaga | cctttggcaa | 5400 |
| cagcatgatc | tgcctattcc | aaattacaac | ctctgctggc | tgggatggat | tgctagcacc | 5460 |
| cattctcaac | agtaagccac | ccgactgtga | ccctaataaa | gttaaccctg | gaagctcagt | 5520 |
| taagggagac | tgtgggaacc | catctgttgg | aattttcttt | tttgtcagtt | acatcatcat | 5580 |
| atccttcctg | gttgtgggtga | acatgtacat | cgcggtcatc | ctggagaact | tcagtgttgc | 5640 |
| tactgaagaa | agtgcagagc | ctctgagtga | ggatgacttt | gagatgttct | atgaggtttg | 5700 |
| ggagaagttt | gatcccgatg | caactcagtt | catggaattt | gaaaaattat | ctcagtttgc | 5760 |
| agctgcgctt | gaaccgcctc | tcaatctgcc | acaaccaaac | aaactccagc | tcattgccat | 5820 |
| ggatttgccc | atggtgagtg | gtgaccggat | ccactgtctt | gatatcttat | ttgctttttac | 5880 |
| aaagcggggt | ctaggagaga | gtggagagat | ggatgctcta | cgaatacaga | tggaagagcg | 5940 |
| attcatggct | tccaatcctt | ccaaggctct | ctatcagcca | atcactacta | ctttaaaacg | 6000 |
| aaaacaagag | gaagtatctg | ctgtcattat | tcagcgtgct | tacagacgcc | accttttaaa | 6060 |
| gcgaactgta | aaacaagctt | cctttacgta | caataaaaac | aaaatcaaag | gtgggggctaa | 6120 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|------------|------------|-------------|------------|------|
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| aactgatctg | accatgtcca | ctgcagcttg | tccaccttcc | tatgaccggg | tgacaaagcc | 6240 |
| aattgtggaa | aaacatgagc | aagaaggcaa | agatgaaaaa | gccaaaggga | aataaatgaa | 6300 |
| aataaataaa | aataattggg | tgacaaattg | tttacagcct | gtgaagggtga | tgtattttta | 6360 |
| tcaacaggac | tccttttagga | ggtcaatgcc | aaactgactg | tttttacaca | aatctcctta | 6420 |
| aggtcagtgc | ctacaataag | acagtgaccc | cttgtcagca | aactgtgact | ctgtgtaaag | 6480 |
| gggagatgac | cttgacagga | ggttactggt | ctcactacca | gctgacactg | ctgaagataa | 6540 |
| gatgcacaat | ggctagtcag | actgtaggga | ccagtttcaa | ggggtgcaaa | cctgtgattt | 6600 |
| tgggggttgt | taacatgaaa | cacttttagt | tagtaattgt | atccactggt | tgcatttcaa | 6660 |
| ctgccacatt | tgtcacattt | ttatggaatc | tgttagtggg | ttcatctttt | tgttaatcca | 6720 |
| tgtgtttatt | atatgtgact | atTTTTgtaa | acgaagtttc | tgttgagaaa | taggctaagg | 6780 |
| acctctataa | caggtatgcc | acctgggggg | tatggcaacc | acatggccct | cccagctaca | 6840 |
| caaagtcgtg | gtttgcatga | gggcatgctg | cacttagaga | tcatgcatga | gaaaaagtca | 6900 |
| caagaaaaac | aaattcttaa | atttcaccat | atttctggga | ggggtaattg | ggtgataagt | 6960 |
| ggagggtgctt | tgttgatctt | gttttgcgaa | atccagcccc | tagaccaagt | agattatttg | 7020 |
| tgggtaggcc | agtaaactct | agcagggtga | aacttcattc | aaatgtttgg | agtcataaat | 7080 |
| gttatgtttc | tttttgttgt | attaaaaaaa | aaacctgaat | agtgaatatt | gcccctcacc | 7140 |
| ctccaccgcc | agaagactga | attgaccaaa | attactcttt | ataaatttct | gctttttcct | 7200 |
| gcactttgtt | tagccatctt | tgggctctca | gcaagggtga | cactgtatat | gttaatgaaa | 7260 |
| tgctatttat | tatgtaaata | gtcattttac | cctgtggtgc | acgtttgagc | aaacaaataa | 7320 |
| tgacctaaagc | acagtattta | ttgcatcaaa | tatgtaccac | aagaaatgta | gagtgcagc | 7380 |
| tttacacagg | taataaaatg | tattctgtac | catttataga | tagtttgat | gctatcaatg | 7440 |
| catgtttata | ttaccatgct | gctgtatctg | gtttctctca | ctgctcagaa | tctcatttat | 7500 |
| gagaaaccat | atgtcagtgg | taaagtcaag | gaaattgttc | aacagatctc | atttatttaa | 7560 |
| gtcattaagc | aatagtttgc | agcactttta | cagctttttg | gttattttta | cattttaagt | 7620 |
| ggataacata | tggtatatag | ccagactgta | cagacatggt | taaaaaaaca | cactgcttaa | 7680 |
| cctattaaat | atgtgttttag | aattttataa | gcaaataata | atactgtaaa | aagtcacttt | 7740 |
| attttatttt | tcagcattat | gtacataaat | atgaagagga | aattatcttc | aggttgatat | 7800 |
| cacaatcact | tttcttactt | tctgtccata | gtactttttc | atgaaagaaa | tttgctaaat | 7860 |
| aagacatgaa | aacaagactg | ggtagttgta | gatttctgct | ttttaaat | catttgctaa | 7920 |
| ttttagatta | tttcacaatt | ttaaggagca | aaatagggtc | acgattcata | tccaaattat | 7980 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| ctgaattgaa | ggtagtgcct | atgttatatt | tggtcttttt | ttctgacttc | ggtttatggt | 8100 |
| ttcatttctt | tggagtaatg | ctgctctaga | ttgttctaaa | tagaatgtgg | gcttcataat | 8160 |
| ttttttttcc | acaaaaacag | agtagtcaac | ttatatagtc | aattacatca | ggacattttg | 8220 |
| tgtttcttac | agaagcaaac | cataggctcc | tcttttcctt | aaaactactt | agataaaactg | 8280 |
| tattcgtgaa | ctgcatgctg | gaaaatgcta | ctattatgct | aaataatgct | aaccaacatt | 8340 |
| taaaatgtgc | aaaactaata | aagattacat | tttttatatt | | | 8380 |

<210> 19
 <211> 8379
 <212> DNA
 <213> homo sapiens

| | |
|-------------|--|
| <400> 19 | |
| atactgcaga | ggtctctggt gcatgtgtgt atgtgtgcgt ttgtgtgtgt ttgtgtgtct 60 |
| gtgtgtttctg | ccccagttag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgcatt | ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga 480 |
| tggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa actttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |
| tgctaattat | gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg 720 |
| attggacaaa | gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa 780 |
| aaattattgc | aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact 840 |
| ggctcgattt | cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg 900 |
| tctcggcatt | gagaacattc agagtctctc gagcattgaa gacgatttca gtcattccag 960 |
| gcctgaaaac | cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga 1020 |
| tcctgactgt | gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca 1080 |
| acctgaggaa | taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta 1140 |
| tagaaaagaa | tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt 1200 |
| ttgactggaa | gtcatatatt caagattcaa gatatcatta tttcctggag ggtttttttag 1260 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
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| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaata | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttggga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgccctcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtggt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagagggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaia | catgttgtca | acctgggtgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
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Updated Seq Listing2.ST25.txt

| | |
|--|------|
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| tgagctcatt tagtgcagac aaccttgag ccactgatga tgataatgaa atgaataatc | 3300 |
| tccaaattgc tgtggatagg atgcacaaag gagtagctta tgtgaaaaga aaaatatatg | 3360 |
| aatttattca acagtccttc attaggaaac aaaagatttt agatgaaatt aaaccacttg | 3420 |
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| ggtgctctgg catttgaaga tatatatatt gatcagcgaa agacgattaa gacgatgttg | 4020 |
| gaatatgctg acaagggttt cacttacatt ttcattctgg aaatgcttct aaaatgggtg | 4080 |
| gcatatggct atcaaacata tttcaccaat gcctgggtgt ggctggactt ctttaattgtt | 4140 |
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| cttaacatgg tcacaatgat ggtggaaaca gatgaccaga gtgaatatgt gactaccatt | 4980 |
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Updated Seq Listing2.ST25.txt

| | |
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| aaacaagagg aagtatctgc tgtcattatt cagcgtgctt acagacgcca ctttttaaag | 6060 |
| cgaactgtaa aacaagcttc ctttacgtac aataaaaaca aaatcaaagg tggggcta | 6120 |
| cttcttataa aagaagacat gataattgac agaataaatg aaaactctat tacagaaaaa | 6180 |
| actgatctga ccatgtccac tgcagcttgt ccaccttcct atgaccgggt gacaaagcca | 6240 |
| attgtggaaa aacatgagca agaaggcaaa gatgaaaaag ccaaagggaa ataaatgaaa | 6300 |
| ataaataaaa ataattgggt gacaaattgt ttacagcctg tgaaggatgat gtatttttat | 6360 |
| caacaggact ctttaggag gtcaatgcca aactgactgt ttttacacaa atctccttaa | 6420 |
| ggtcagtgcc tacaataaga cagtacccc ttgtcagcaa actgtgactc tgtgtaaagg | 6480 |
| ggagatgacc ttgacaggag gttactgttc tcactaccag ctgacactgc tgaagataag | 6540 |
| atgcacaatg gctagtcaga ctgtaggac cagtttcaag gggtgcaaac ctgtgatttt | 6600 |
| ggggttgttt aacatgaaac actttagtgt agtaattgta tccactgttt gcatttcaac | 6660 |
| tgccacattt gtcacatttt tatggaatct gttagtggat tcatcttttt gttaatccat | 6720 |
| gtgtttatta tatgtgacta tttttgtaa cgaagtttct gttgagaaat aggctaagga | 6780 |
| cctctataac aggtatgcca cctggggggt atggcaacca catggccctc ccagctacac | 6840 |
| aaagtcgtgg tttgcatgag ggcatgctgc acttagagat catgcatgag aaaaagtcac | 6900 |
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Updated Seq Listing2.ST25.txt

| | |
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| gggtaggcca gtaaacttta gcaggtgcaa acttcattca aatgtttgga gtcataaatg | 7080 |
| ttatgtttct ttttgttgta ttaaaaaaaaa aacctgaata gtgaatattg cccctcaccc | 7140 |
| tccaccgcca gaagactgaa ttgacaaaaa ttactcttta taaatttctg ctttttcctg | 7200 |
| cactttgttt agccatcttt gggctctcag caaggttgac actgtatatg ttaatgaaat | 7260 |
| gctatttatt atgtaaatag tcattttacc ctgtggtgca cgtttgagca aacaaataat | 7320 |
| gacctaagca cagtatttat tgcacaaat atgtaccaca agaaatgtag agtgcaagct | 7380 |
| ttacacaggt aataaaatgt attctgtacc atttatagat agtttgatg ctatcaatgc | 7440 |
| atgtttatat taccatgctg ctgtatctgg tttctctcac tgctcagaat ctcatattg | 7500 |
| agaaaccata tgtcagtggg aaagtcaagg aaattgttca acagatctca tttatttaag | 7560 |
| tcattaagca atagtttgca gcactttaac agctttttgg ttatttttac attttaagt | 7620 |
| gataacatat ggtatatagc cagactgtac agacatgttt aaaaaaacac actgcttaac | 7680 |
| ctattaaata tgtgtttaga attttataag caaatataaa tactgtaaaa agtcacttta | 7740 |
| ttttattttt cagcattatg tacataaata tgaagaggaa attatcttca ggttgatatc | 7800 |
| acaatcactt ttcttacttt ctgtccatag tactttttca tgaaagaaat ttgctaaata | 7860 |
| agacatgaaa acaagactgg gtagttgtag atttctgctt tttaaattac atttgcta | 7920 |
| tttagattat ttcacaattt taaggagcaa aatagggttca cgattcatat ccaaattatg | 7980 |
| ctttgcaatt ggaaaagggt ttaaaatttt atttatattt ctggtagtac ctgtactaac | 8040 |
| tgaattgaag gtagtgctta tgttattttt gttctttttt tctgacttcg gtttatgttt | 8100 |
| tcatttcttt ggagtaatgc tgctctagat tgttctaaat agaattgtggg cttcataatt | 8160 |
| tttttttcca caaaaacaga gtagtcaact tatatagtca attacatcag gacattttgt | 8220 |
| gtttcttaca gaagcaaacc ataggctcct cttttcctta aaactactta gataaactgt | 8280 |
| attcgtgaac tgcattgctg aaaatgctac tattatgcta aataatgcta accaacattt | 8340 |
| aaaatgtgca aaactaataa agattacatt ttttatttt | 8379 |

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 <212> DNA
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| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa tttcatatgc agaataaatg | 240 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|------------|-------------|------------|-------------|------|
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| acagcttcaa | cttcttcacc | agagaatctc | ttgcggttat | tgaaagacgc | attgcagaag | 360 |
| aaaaggcaaa | gaatcccaaa | ccagacaaaa | aagatgacga | cgaaaatggc | ccaaagccaa | 420 |
| atagtgaact | ggaagctgga | aagaaccttc | cattttattta | tggagacatt | cctccagaga | 480 |
| tggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | actttttatag | 540 |
| tattgaataa | attgaaggcc | atcttccggt | tcagtgccac | ctctgccctg | tacatttttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | atcttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagttctcc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttggag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctacctaata | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcgaggga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggagagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggcagtggt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaaggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgtttctc | 2520 |
| catattgggt | aaaagtgaag | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgtttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaatatg | ctaataaaga | tcacgagcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgatttgtgt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggt | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgacagc | aaccttgacg | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
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| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaatttaaac | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
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Updated Seq Listing2.ST25.txt

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| tgccatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaattctt | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttggtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgctt | atattctggc | taattttcag | catcatgggc | gtaaatttgt | ttgctggcaa | 4380 |
| attctaccac | tgtattaaca | ccacaactgg | tgacagggtt | gacatcgaag | acgtgaataa | 4440 |
| tcatactgat | tgcctaaaac | taatagaaag | aaatgagact | gctcgatgga | aaaatgtgaa | 4500 |
| agtaaacttt | gataatgtag | gatttgggta | tctctctttg | cttcaagttg | ccacattcaa | 4560 |
| aggatggatg | gatataatgt | atgcagcagt | tgattccaga | aatgtggaac | tccagcctaa | 4620 |
| gtatgaaaaa | agtctgtaca | tgtatcttta | ctttgttatt | ttcatcatct | ttgggtcctt | 4680 |
| cttcaccttg | aacctgttta | ttggtgtcat | catagataat | ttcaaccagc | agaaaaagaa | 4740 |
| gtttggaggt | caagacatct | ttatgacaga | agaacagaag | aaatactata | atgcaatgaa | 4800 |
| aaaattagga | tcgaaaaaac | cgcaaaagcc | tatacctcga | ccaggaaaca | aatttcaagg | 4860 |
| aatggtcttt | gacttcgtaa | ccagacaagt | ttttgacata | agcatcatga | ttctcatctg | 4920 |
| tcttaacatg | gtcacaatga | tggtggaaac | agatgaccag | agtgaatatg | tgactaccat | 4980 |
| tttgtcacgc | atcaatctgg | tgttcattgt | gctatttact | ggagagtgtg | tactgaaact | 5040 |
| catctctcta | cgccattatt | attttaccat | tgatggaat | atttttgatt | ttgtggttgt | 5100 |
| cattctctcc | attgtaggta | tgtttcttgc | cgagctgata | gaaaagtatt | tcgtgtcccc | 5160 |
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| agcaaagggg | atccgcacgc | tgctctttgc | tttgatgatg | tcccttcctg | cgttgtttta | 5280 |
| catcggcctc | ctactcttcc | tagtcatgtt | catctacgcc | atctttggga | tgtccaactt | 5340 |
| tgcctatggt | aagaggggaag | ttgggatcga | tgacatgttc | aactttgaga | cctttggcaa | 5400 |
| cagcatgatc | tgcctattcc | aaattacaac | ctctgctggc | tgggatggat | tgctagcacc | 5460 |
| cattctcaac | agtaagccac | ccgactgtga | ccctaataaa | gttaaccctg | gaagctcagt | 5520 |
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| atccttcctg | gttgtgggtga | acatgtacat | cgcggtcatc | ctggagaact | tcagtgttgc | 5640 |
| tactgaagaa | agtgcagagc | ctctgagtga | ggatgacttt | gagatgttct | atgaggtttg | 5700 |
| ggagaagttt | gatccccgatg | caactcagtt | catggaattt | gaaaaattat | ctcagtttgc | 5760 |
| agctgcgctt | gaaccgcctc | tcaatctgcc | acaaccaaac | aaactccagc | tcattgccat | 5820 |
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Updated Seq Listing2.ST25.txt

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| aaaacaagag gaagtatctg ctgtcattat tcagcgtgct tacagacgcc accttttaaa | 6060 |
| gcgaactgta aaacaagctt cctttacgta caataaaaac aaaatcaaag gtgggggctaa | 6120 |
| tcttcttata aaagaagaca tgataattga cagaataaat gaaaactcta ttacagaaaa | 6180 |
| aactgatctg accatgtcca ctgcagcttg tccaccttcc tatgaccggg tgacaaagcc | 6240 |
| aattgtggaa aaacatgagc aagaaggcaa agatgaaaaa gccaaagggg aataaatgaa | 6300 |
| aataaataaa aataattggg tgacaaattg tttacagcct gtgaagggtga tgtattttta | 6360 |
| tcaacaggac tccttttagga ggtcaatgcc aaactgactg tttttacaca aatctcctta | 6420 |
| aggtcagtgc ctacaataag acagtgaccc cttgtcagca aactgtgact ctgtgtaaag | 6480 |
| gggagatgac cttgacagga ggttactggt ctcactacca gctgacactg ctgaagataa | 6540 |
| gatgcacaat ggctagtcag actgtagggg ccagtttcaa ggggtgcaaa cctgtgattt | 6600 |
| tgggggttgt taacatgaaa cacttttagtg tagtaattgt atccactggt tgcatttcaa | 6660 |
| ctgccacatt tgtcacattt ttatggaatc tgttagtga ttcatctttt tgtaaatcca | 6720 |
| tgtgtttatt atatgtgact atttttgtaa acgaagtttc tgttgagaaa taggctaagg | 6780 |
| acctctataa caggatgcc acctgggggg tatggcaacc acatggccct cccagctaca | 6840 |
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| caagaaaaac aaattcttaa atttcaccat atttctggga ggggtaattg ggtgataagt | 6960 |
| ggagggtgctt tgttgatctt gttttgcgaa atccagcccc tagaccaagt agattatttg | 7020 |
| tgggtaggcc agtaaatctt agcagggtgca aacttcattc aaatgtttgg agtcataaat | 7080 |
| gttatgtttc tttttgttgt attaaaaaaa aaacctgaat agtgaatatt gcccctcacc | 7140 |
| ctccaccgcc agaagactga attgaccaa attactcttt ataaatttct gctttttcct | 7200 |
| gcactttggt tagccatctt tgggctctca gcaagggtga cactgtatat gttaatgaaa | 7260 |
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| tttacacagg taataaaatg tattctgtac ctttataga tagtttggtat gctatcaatg | 7440 |
| catgtttata ttaccatgct gctgtatctg gtttctctca ctgctcagaa tctcatttat | 7500 |
| gagaaaccat atgtcagtgg taaagtcaag gaaattgttc aacagatctc atttatttaa | 7560 |
| gtcattaagc aatagtttgc agcactttaa cagctttttg gttattttta cattttaagt | 7620 |
| ggataacata tggtatatag ccagactgta cagacatggt taaaaaaca cactgcttaa | 7680 |
| cctattaaat atgtgttttag aattttataa gcaaataata atactgtaaa aagtcacttt | 7740 |
| attttatttt tcagcattat gtacataaat atgaagagga aattatcttc aggttgatat | 7800 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| aagacatgaa | aacaagactg | ggtagtgtga | gattttctgct | ttttaaatta | catttgctaa | 7920 |
| tttttagatta | tttcacaatt | ttaaggagca | aaatagggtc | acgattcata | tccaaattat | 7980 |
| gctttgcaat | tggaaaaggg | tttaaaat | tatttatatt | tctggtagta | cctgtactaa | 8040 |
| ctgaattgaa | ggtagtgtct | atgttatttt | tgttcttttt | ttctgacttc | ggtttatgtt | 8100 |
| ttcatttctt | tggagtaatg | ctgctctaga | ttgttctaaa | tagaatgtgg | gcttcataat | 8160 |
| ttttttttcc | acaaaaacag | agtagtcaac | ttatatagtc | aattacatca | ggacattttg | 8220 |
| tgtttcttac | agaagcaaac | cataggctcc | tcttttcctt | aaaactactt | agataaactg | 8280 |
| tattcgtgaa | ctgcatgctg | gaaaatgcta | ctattatgct | aaataatgct | aaccaacatt | 8340 |
| taaaatgtgc | aaaactaata | aagattacat | tttttatttt | | | 8380 |

<210> 21
 <211> 8380
 <212> DNA
 <213> homo sapiens

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| gtgtgttctg | ccccagtgag | actgcagccc | ttgtaaatac | tttgacacct | tttgcaagaa | 120 |
| ggaatctgaa | caattgcaac | tgaaggcaca | ttgttatcat | ctcgtctttg | ggtgatgctg | 180 |
| ttcctcactg | cagatggata | attttccttt | taatcaggaa | tttcatatgc | agaataaatg | 240 |
| gtaattaaaa | tgtgcaggat | gacaagatgg | agcaaacagt | gcttgtacca | ccaggacctg | 300 |
| acagcttcaa | cttcttcacc | agagaatctc | ttgcggtat | tgaaagacgc | attgcagaag | 360 |
| aaaaggcaaa | gaatcccaa | ccagacaaaa | aagatgacga | cgaaaatggc | ccaaagccaa | 420 |
| atagtgactt | ggaagctgga | aagaaccttc | catttattta | tggagacatt | cctccagaga | 480 |
| tgggtgtcaga | gcccctggag | gacctggacc | cctactatat | caataagaaa | acttttatag | 540 |
| tattgaataa | attgaaggcc | atcttcggt | tcagtgccac | ctctgccctg | tacattttaa | 600 |
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | attttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagttctcc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|------------|------------|-------------|------|
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttggag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctaccta | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgg | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattggtt | aaaagtga | catgttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggtttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaatatg | ctaataaaga | tcatcgga | ttccgtgggg | gctctgggaa | 2940 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggg | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgtag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtcctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatgggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctgggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attgggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaatctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcactactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attgggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | atgcaatgaa | 4800 |
| aaaattagga | tcgaaaaaac | cgcaaaagcc | tatacctcga | ccaggaaaca | aatttcaagg | 4860 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
| aatggtcttt gacttcgtaa ccagacaagt ttttgacata agcatcatga ttctcatctg | 4920 |
| tcttaacatg gtcacaatga tgggtggaac agatgaccag agtgaatatg tgactaccat | 4980 |
| tttgtcacgc atcaatctgg tgttcattgt gctatttact ggagagtgtg tactgaaact | 5040 |
| catctctcta cgccattatt attttaccat tggatggaat atttttgatt ttgtggttgt | 5100 |
| cattctctcc attgtaggta tgtttcttgc cgagctgata gaaaagtatt tcgtgtcccc | 5160 |
| taccctgttc cgagtgatcc gtcttgctag gattggccga atcctacgtc tgatcaaagg | 5220 |
| agcaaagggg atccgcacgc tgctctttgc tttgatgatg tcccttcctg cgttgtttaa | 5280 |
| catcggcctc ctactcttcc tagtcatgtt catctacgcc atctttggga tgtccaactt | 5340 |
| tgcctatgtt aagaggggaag ttgggatcga tgacatgttc aactttgaga cctttggcaa | 5400 |
| cagcatgatc tgcctattcc aaattacaac ctctgctggc tgggatggat tgctagcacc | 5460 |
| cattctcaac agtaagccac ccgactgtga ccctaataaa gttaaccctg gaagctcagt | 5520 |
| taagggagac tgtgggaacc catctgttgg aattttcttt tttgtcagtt acatcatcat | 5580 |
| atccttcctg gttgtggtga acatgtacat cgcggtcatc ctggagaact tcagtgttgc | 5640 |
| tactgaagaa agtgcagagc ctctgagtga ggatgacttt gagatgttct atgaggtttg | 5700 |
| ggagaagttt gatcccgatg caactcagtt catggaattt gaaaaattat ctcagtttgc | 5760 |
| agctgcgctt gaaccgcctc tcaatctgcc acaaccaaac aaactccagc tcattgccat | 5820 |
| ggatttgccc atggtgagtg gtgaccggat ccactgtctt gatatcttat ttgcttttac | 5880 |
| aaagcgggtt ctaggagaga gtggagagat ggatgctcta cgaatacaga tggaagagcg | 5940 |
| attcatggct tccaatcctt ccaaggtctc ctatcagcca atcactacta ctttaaaacg | 6000 |
| aaaacaagag gaagtatctg ctgtcattat tcagcgtgct tacagacgcc accttttaaa | 6060 |
| gcgaactgta aaacaagctt cttttacgta caataaaaac aaaatcaaag gtggggctaa | 6120 |
| tcttcttata aaagaagaca tgataattga cagaataaat gaaaactcta ttacagaaaa | 6180 |
| aactgatctg accatgtcca ctgcagcttg tccaccttcc tatgaccggg tgacaaagcc | 6240 |
| aattgtggaa aaacatgagc aagaaggcaa agatgaaaaa gccaaaggga aataaatgaa | 6300 |
| aataaataaa aataattggg tgacaaattg tttacagcct gtgaagggtga tgtattttta | 6360 |
| tcaacaggac tccttttagga ggtcaatgcc aaactgactg tttttacaca aatctcctta | 6420 |
| aggtcagtgc ctacaataag acagtgacct cttgtcagca aactgtgact ctgtgtaaag | 6480 |
| gggagatgac cttgacagga ggttactgtt ctactacca gctgacactg ctgaagataa | 6540 |
| gatgcacaat ggctagtcag actgtagggg ccagtttcaa ggggtgcaaa cctgtgattt | 6600 |
| tgggggttgt taacatgaaa cactttagt tagtaattgt atccactgtt tgcatttcaa | 6660 |
| ctgccacatt tgtcacattt ttatggaatc tgttagtggg ttcactcttt tggttaatcca | 6720 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
| tgtgtttatt | atatgtgact | atTTTTgtaa | acgaagtttc | tgTTgagaaa | taggctaagg | 6780 |
| acctctataa | caggatgcc | acctgggggg | tatggcaacc | acatggccct | cccagctaca | 6840 |
| caaagtcgtg | gtttgcatga | gggcatgctg | cacttagaga | tcatgcatga | gaaaaagtca | 6900 |
| caagaaaaac | aaattcttaa | atTtcaccat | atTtctggga | ggggtaattg | ggtgataagt | 6960 |
| ggaggTgctt | tgTtgatctt | gtTttgcgaa | atccagcccc | tagaccaagt | agattatttg | 7020 |
| tgggtaggcc | agtaaTctt | agcaggTgca | aactTcattc | aaatgtTtg | agtcataaat | 7080 |
| gttatgtTtc | tTtttgtTgt | attaaaaaaa | aaacTgaat | agtgaatatt | gcccTcacc | 7140 |
| ctccaccgcc | agaagactga | attgaccaa | attactctt | ataaattTct | gctTttTcct | 7200 |
| gcactTtgTt | tagccatctt | tgggctctca | gcaaggTtga | cactgtatat | gttaatgaaa | 7260 |
| tgctattTtat | tatgtaaata | gtcattTttac | cctgtggTgc | acgtTtgagc | aaacaaataa | 7320 |
| tgacctaaGc | acagtattta | ttgcatcaaa | tatgtaccac | aagaaatgta | gagtgcagc | 7380 |
| tTtacacagg | taataaaatg | tattctgtac | catttataga | tagTttggat | gctatcaatg | 7440 |
| catgtTttata | Ttaccatgct | gctgtatctg | gtTtctctca | ctgctcagaa | tctcattTtat | 7500 |
| gagaaaccat | atgtcagTgg | taaagtcaag | gaaattgtTc | aacagatctc | atttattTtaa | 7560 |
| gtcattaagc | aatagTttgc | agcactTtaa | cagctTttTg | gttattTttta | cattTtaagt | 7620 |
| ggataacata | tggtatatag | ccagactgta | cagacatgtt | taaaaaaaca | cactgcttaa | 7680 |
| cctattaaat | atgtgtTtag | aattTttataa | gcaaataata | atactgtaaa | aagTcactTt | 7740 |
| atTttattTt | tCagcattat | gtacataaat | atgaagagga | aattatctTc | aggTtgatat | 7800 |
| cacaatcact | Tttcttactt | tctgtccata | gtactTttTc | atgaaagaaa | tttgctaaat | 7860 |
| aagacatgaa | aacaagactg | ggtagTtgta | gattTctgct | Ttttaaatta | cattTgctaa | 7920 |
| Ttttagatta | Tttcacaatt | Ttaaggagca | aaataggTtc | acgattcata | Tccaaattat | 7980 |
| gctTtgcaat | Tggaaaagg | Tttaaaattt | tatttatatt | tctggtagta | cctgtactaa | 8040 |
| ctgaattgaa | ggtagTgctt | atgttatTtt | TgtTctTttt | TtctgactTc | ggTttatgtt | 8100 |
| TtcattTctt | Tggagtaatg | ctgctctaga | TgtTctTaaa | tagaatgtgg | gctTcataat | 8160 |
| TttTttTtcc | acaaaaacag | agtagtcaac | Ttatatagtc | aattacatca | ggacattTtg | 8220 |
| TgtTtctTtac | agaagcaaac | cataggctcc | TctTttTcctt | aaaactactt | agataaaactg | 8280 |
| tattcgtgaa | ctgcatgctg | gaaaatgcta | ctattatgct | aaataatgct | aaccaacatt | 8340 |
| Taaaatgtgc | aaaactaata | aagattacat | TttttattTt | | | 8380 |

<210> 22
 <211> 8381
 <212> DNA
 <213> homo sapiens

<400> 22

Updated Seq Listing2.ST25.txt

| | |
|---|------|
| atactgcaga ggtctctggt gcatgtgtgt atgtgtgctt ttgtgtgtgt | 60 |
| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctctcttttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg | 240 |
| gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg | 300 |
| acagcttcaa cttcttcacc agagaatctc ttgcggtctat tgaaagacgc attgcagaag | 360 |
| aaaaggcaaa gaatcccaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa | 420 |
| atagtgaactt ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga | 480 |
| tggtgtcaga gccctggag gacctggacc cttactatat caataagaaa actttttatag | 540 |
| tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa | 600 |
| ctcccttcaa tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca | 660 |
| tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aacctctctg | 720 |
| attggacaaa gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa | 780 |
| aaattattgc aaggggattc tgtttagaag attttacttt ctttcgggat ccatggaact | 840 |
| ggctcgattt cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg | 900 |
| tctcggcatt gagaacattc agagtctctc gagcattgaa gacgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcatgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggttttttag | 1260 |
| atgcactact atgtggaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |
| tctacctaataa aaatttgatc ctggctgtgg tggccatggc ctacagggaa cagaatcagg | 1560 |
| ccaccttgga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta | 1620 |
| aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag | 1680 |
| agcccagtgag agcaggcagg ctctcagaca gctcatctga agcctctaag ttgagttcca | 1740 |
| agagtgtctaa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg | 1800 |
| gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga | 1860 |
| aagggttttcg cttctccatt gaagggaacc gattgacata tgaaaagagg tactcctccc | 1920 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|------------|------|
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagcttttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaaa | catgtttgtca | acctggttgt | gatggaccca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttctact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgccca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacggtttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tggaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcacgagcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtgggtcggc | atgcagctct | 3000 |
| ttggtaaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgctgtctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggg | catggtgatt | ggaaacctag | tggctctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgtag | ccactgatga | tgataattaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaatttaaac | acggaagact | 3660 |
| ttagtagtga | atcggtctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
| aagaaactct tgaaccagaa gcttgtttca ctgaaggctg tgtacaaaga ttcaagtgtt | 3840 |
| gtcaaatcaa tgtggaagaa ggcagaggaa aacaatggtg gaacctgaga aggacgtgtt | 3900 |
| tccgaatagt tgaacataac tggtttgaga ctttcattgt tttcatgatt ctccttagta | 3960 |
| gtggtgctct ggcatttgaa gatatatata ttgatcagcg aaagacgatt aagacgatgt | 4020 |
| tggaatatgc tgacaagggt ttcacttaca ttttcattct ggaaatgctt ctaaaatggg | 4080 |
| tggcatatgg ctatcaaaca tatttcacca atgcctggtg ttggctggac ttcttaattg | 4140 |
| ttgatgtttc attggtcagt ttaacagcaa atgccttggg ttactcagaa cttggagcca | 4200 |
| tcaaatctct caggacacta agagctctga gacctctaag agccttatct cgatttgaag | 4260 |
| ggatgagggt ggttgtgaat gcccttttag gagcaattcc atccatcatg aatgtgcttc | 4320 |
| tggtttgtct tatattctgg ctaattttca gcatcatggg cgtaaatttg tttgctggca | 4380 |
| aattctacca ctgtattaac accacaactg gtgacagggt tgacatcgaa gacgtgaata | 4440 |
| atcatactga ttgcctaaaa ctaatagaaa gaaatgagac tgctcgatgg aaaaatgtga | 4500 |
| aagtaaactt tgataatgta ggatttgggt atctctcttt gcttcaagtt gccacattca | 4560 |
| aaggatggat ggatataatg tatgcagcag ttgattccag aaatgtggaa ctccagccta | 4620 |
| agtatgaaaa aagtctgtac atgtatcttt actttgttat tttcatcatc tttgggtcct | 4680 |
| tcttcacctt gaacctgttt attggtgtca tcatagataa tttcaaccag cagaaaaaga | 4740 |
| agtttggagg tcaagacatc tttatgacag aagaacagaa gaaatactat aatgcaatga | 4800 |
| aaaaattagg atcgaaaaaa ccgcaaaagc ctatacctcg accaggaaac aaatttcaag | 4860 |
| gaatggtctt tgacttcgta accagacaag tttttgacat aagcatcatg attctcatct | 4920 |
| gtcttaacat ggtcacaatg atggtggaaa cagatgacca gagtgaatat gtgactacca | 4980 |
| ttttgtcacg catcaatctg gtgttcattg tgctatttac tggagagtgt gtactgaaac | 5040 |
| tcattctctc acgccattat tattttacca ttggatggaa tatttttgat tttgtggttg | 5100 |
| tcattctctc cattgtaggt atgtttcttg ccgagctgat agaaaagtat ttcgtgtccc | 5160 |
| ctaccctgtt ccgagtgatc cgtcttgcta ggattggccg aatcctacgt ctgatcaaag | 5220 |
| gagcaaaggg gatccgcacg ctgctctttg ctttgatgat gtcccttcct gcgttgttta | 5280 |
| acatcggcct cctactcttc ctagtcatgt tcattctacgc catctttggg atgtccaact | 5340 |
| ttgcctatgt taagagggaa gttgggacg atgacatgtt caactttgag acctttggca | 5400 |
| acagcatgat ctgcctattc caaattacaa cctctgctgg ctgggatgga ttgctagcac | 5460 |
| ccattctcaa cagtaagcca cccgactgtg accctaataa agttaaccct ggaagctcag | 5520 |
| ttaagggaga ctgtgggaac ccatctgttg gaattttctt ttttgtcagt tacatcatca | 5580 |
| tatccttcct ggttgtggtg aacatgtaca tcgcggtcat cctggagaac ttcagtgttg | 5640 |
| ctactgaaga aagtgcagag cctctgagtg aggatgactt tgagatgttc tatgaggttt | 5700 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|------------|------------|------------|-------------|-------------|------|
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| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcc | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctcctttagg | aggtcaatgc | caaactgact | gtttttacac | aaatctcctt | 6420 |
| aaggtcagtg | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttggggttgt | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtgg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatttttgta | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcatg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggaggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaactt | tagcaggtgc | aaacttcatt | caaagtgttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgcccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgttaatgaa | 7260 |
| atgctattta | ttatgtaaat | agtcatttta | ccctgtggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaa | cacagtatct | attgcatcaa | atatgtacca | caagaaatgt | agagtgcag | 7380 |
| ctttacacag | gtaataaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagtg | gtaaagtcaa | ggaaattgtt | caacagatct | cattttattta | 7560 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaatata | aatactgtaa | aaagtcactt | 7740 |
| tattttatTT | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtactTTTT | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| attttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgt | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttctt | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttatTT | t | | 8381 |

<210> 23
 <211> 8381
 <212> DNA
 <213> homo sapiens

| | |
|------------|---|
| <400> 23 | |
| atactgcaga | ggctcttggt gcatgtgtgt atgtgtgctt ttgtgtgtgt ttgtgtgtct 60 |
| gtgtgttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctctgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgctggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc catttatTTa tggagacatt cctccagaga 480 |
| tggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa acttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattTTaa 600 |
| ctcccttcaa | tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca 660 |
| tgctaattat | gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg 720 |
| attggacaaa | gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa 780 |
| aaattattgc | aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact 840 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|-------------|------------|------------|-------------|------|
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagtttctc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttgag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aaatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | tttcctggag | ggtttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | tttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctaccta | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgg | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aagggttttcg | cttctccatt | gaaggggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagctttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgcctgttgg | acagcttctg | ccagagggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacia | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgtttctc | 2520 |
| catattggtt | aaaagtga | catgtttgtca | acctggttgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggtttttact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcc | tggatcctta | ctattatttc | caagaaggct | 2760 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcacgagcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttgccc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtggt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctggtca | agccatgtgc | cttactgtct | 3180 |
| tcagtgatggt | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgcat | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |
| aatttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaatggaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtccta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
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| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttggttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
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| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gctttaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttggagg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tgagagagtgt | gtactgaaac | 5040 |
| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcatctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagagggaa | gttgggatcg | atgacatggt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |
| ccattctcaa | cagtaagcca | cccgaactgt | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
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| gggagaagtt | tgatcccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggtct | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaaggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttag | aggtcaatgc | caaactgact | gtttttacac | aaatctcctt | 6420 |
| aaggtcagtg | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttgggggttgt | ttaacatgaa | acacttttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
| actgccacat | ttgtcacatt | tttatggaat | ctgttagtgg | attcatcttt | ttgttaatcc | 6720 |
| atgtgtttat | tatatgtgac | tatTTTTgtA | aacgaagttt | ctgttgagaa | ataggctaag | 6780 |
| gacctctata | acaggtatgc | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcAtg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggaggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaAtct | tagcaggtgc | aaacttcatt | caaAtgtttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgccccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgacttttgt | ttagccatct | ttgggctctc | agcaaggttg | acactgtata | tgttaatgaa | 7260 |
| atgctattta | ttatgtaaAt | agtcatttta | ccctgtggtg | cacgtttgag | caaacaaata | 7320 |
| atgacctaag | cacagtattt | attgcatcaa | atatgtacca | caagaaatgt | agagtgcAag | 7380 |
| ctttacacag | gtaataaaaAt | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagtg | gtaaagtcaa | ggaaattgtt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggataacat | atggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaataata | aatactgtaa | aaagtcactt | 7740 |
| tattttattt | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgct | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaactaat | aaagattaca | ttttttattt | t | | 8381 |

Updated Seq Listing2.ST25.txt

<210> 24
 <211> 229
 <212> DNA
 <213> homo sapiens

<400> 24
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 ctgttttagaa gattttactt tccttcggga tccatggaac tggctcgatt tcactgtcat 120
 tacatttgcg taaatgcctt ttttgaaact ttaagagaga acatagtttg gttttccatc 180
 agtgcttatg cttttaagaa taggtttgct ttacctgtag aatattttg 229

<210> 25
 <211> 229
 <212> DNA
 <213> homo sapiens

<400> 25
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 cactgttact ttatcaaatt ttttggaagc ttgttttcag atacaccttc acaggaatat 120
 atacttttga atcacttata aaaattattg caaggggatt ctgttttagaa gattttactt 180
 tccttcggga tccatggaac tggctcgatt tcactgtcat tacatttgc 229

<210> 26
 <211> 3449
 <212> PRT
 <213> homo sapiens

<400> 26
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 1 5 10 15
 Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
 20 25 30
 Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45
 Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60
 Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80
 Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95
 Lys Ala Ile Phe Trp Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr

100

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Updated Seq Listing2.ST25.txt

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380
 Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400
 Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415
 Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480
 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605

Updated Seq Listing2.ST25.txt

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700
 Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720
 Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735
 Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750
 Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765
 Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780
 Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800
 Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815
 Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830
 Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845
 Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860

Updated Seq Listing2.ST25.txt

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880
 Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895
 Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910
 Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925
 Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940
 Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960
 Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975
 Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990
 Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005
 Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020
 Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035
 Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050
 Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
 1055 1060 1065
 Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
 1070 1075 1080
 Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
 1085 1090 1095
 Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
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| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| 1100 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| 1115 | | | | | | 1120 | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| 1130 | | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| 1145 | | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| 1160 | | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| 1175 | | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| 1190 | | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| 1205 | | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| 1220 | | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Met | Glu | Gln |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Thr | Val | Leu | Val | Pro | Pro | Gly | Pro | Asp | Ser | Phe | Asn | Phe | Phe | Thr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Arg | Glu | Ser | Leu | Ala | Ala | Ile | Glu | Arg | Arg | Ile | Ala | Glu | Glu | Lys |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Ala | Lys | Asn | Pro | Lys | Pro | Asp | Lys | Lys | Asp | Asp | Asp | Glu | Asn | Gly |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |
| Pro | Lys | Pro | Asn | Ser | Asp | Leu | Glu | Ala | Gly | Lys | Asn | Leu | Pro | Phe |
| 1490 | | | | | | 1495 | | | | | 1500 | | | |
| Ile | Tyr | Gly | Asp | Ile | Pro | Pro | Glu | Met | Val | Ser | Glu | Pro | Leu | Glu |
| 1505 | | | | | | 1510 | | | | | 1515 | | | |
| Asp | Leu | Asp | Pro | Tyr | Cys | Ile | Asn | Lys | Lys | Thr | Phe | Ile | Val | Leu |
| 1520 | | | | | | 1525 | | | | | 1530 | | | |
| Asn | Lys | Leu | Lys | Ala | Ile | Phe | Arg | Phe | Ser | Ala | Thr | Ser | Ala | Leu |
| 1535 | | | | | | 1540 | | | | | 1545 | | | |
| Tyr | Ile | Leu | Thr | Pro | Phe | Asn | Pro | Leu | Arg | Lys | Ile | Ala | Ile | Lys |
| 1550 | | | | | | 1555 | | | | | 1560 | | | |
| Ile | Leu | Val | His | Ser | Leu | Phe | Ser | Met | Leu | Ile | Met | Cys | Thr | Ile |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Thr | Asn | Cys | Val | Phe | Met | Thr | Met | Ser | Asn | Pro | Pro | Asp | Trp |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Thr | Lys | Asn | Val | Glu | Tyr | Thr | Phe | Thr | Gly | Ile | Tyr | Thr | Phe | Glu |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Ser | Leu | Ile | Lys | Ile | Ile | Ala | Arg | Gly | Phe | Cys | Leu | Glu | Asp | Phe |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Thr | Phe | Leu | Arg | Asp | Pro | Trp | Asn | Trp | Leu | Asp | Phe | Thr | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Thr | Phe | Ala | Tyr | Val | Thr | Glu | Phe | Val | Asp | Leu | Gly | Asn | Val | Ser |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Ala | Leu | Arg | Thr | Phe | Arg | Val | Leu | Arg | Ala | Leu | Lys | Thr | Ile | Ser |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Val | Ile | Pro | Gly | Leu | Lys | Thr | Ile | Val | Gly | Ala | Leu | Ile | Gln | Ser |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Val | Lys | Lys | Leu | Ser | Asp | Val | Met | Ile | Leu | Thr | Val | Phe | Cys | Leu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Ser | Val | Phe | Ala | Leu | Ile | Gly | Leu | Gln | Leu | Phe | Met | Gly | Asn | Leu |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Arg | Asn | Lys | Cys | Ile | Gln | Trp | Pro | Pro | Thr | Asn | Ala | Ser | Leu | Glu |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Glu | His | Ser | Ile | Glu | Lys | Asn | Ile | Thr | Val | Asn | Tyr | Asn | Gly | Thr |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Leu | Ile | Asn | Glu | Thr | Val | Phe | Glu | Phe | Asp | Trp | Lys | Ser | Tyr | Ile |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Gln | Asp | Ser | Arg | Tyr | His | Tyr | Phe | Leu | Glu | Gly | Phe | Leu | Asp | Ala |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Leu | Leu | Cys | Gly | Asn | Ser | Ser | Asp | Ala | Gly | Gln | Cys | Pro | Glu | Gly |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Tyr | Met | Cys | Val | Lys | Ala | Gly | Arg | Asn | Pro | Asn | Tyr | Gly | Tyr | Thr |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Ser | Phe | Asp | Thr | Phe | Ser | Trp | Ala | Phe | Leu | Ser | Leu | Phe | Arg | Leu |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Met | Thr | Gln | Asp | Phe | Trp | Glu | Asn | Leu | Tyr | Gln | Leu | Thr | Leu | Arg |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Ala | Gly | Lys | Thr | Tyr | Met | Ile | Phe | Phe | Val | Leu | Val | Ile | Phe |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Gly | Ser | Phe | Tyr | Leu | Ile | Asn | Leu | Ile | Leu | Ala | Val | Val | Ala |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Met | Ala | Tyr | Glu | Glu | Gln | Asn | Gln | Ala | Thr | Leu | Glu | Glu | Ala | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Gln | Lys | Glu | Ala | Glu | Phe | Gln | Gln | Met | Ile | Glu | Gln | Leu | Lys | Lys |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Gln | Gln | Glu | Ala | Ala | Gln | Gln | Ala | Ala | Thr | Ala | Thr | Ala | Ser | Glu |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| His | Ser | Arg | Glu | Pro | Ser | Ala | Ala | Gly | Arg | Leu | Ser | Asp | Ser | Ser |
| | 1910 | | | | | 1915 | | | | | 1920 | | | |
| Ser | Glu | Ala | Ser | Lys | Leu | Ser | Ser | Lys | Ser | Ala | Lys | Glu | Arg | Arg |
| | 1925 | | | | | 1930 | | | | | 1935 | | | |
| Asn | Arg | Arg | Lys | Lys | Arg | Lys | Gln | Lys | Glu | Gln | Ser | Gly | Gly | Glu |
| | 1940 | | | | | 1945 | | | | | 1950 | | | |
| Glu | Lys | Asp | Glu | Asp | Glu | Phe | Gln | Lys | Ser | Glu | Ser | Glu | Asp | Ser |
| | 1955 | | | | | 1960 | | | | | 1965 | | | |
| Ile | Arg | Arg | Lys | Gly | Phe | Arg | Phe | Ser | Ile | Glu | Gly | Asn | Arg | Leu |
| | 1970 | | | | | 1975 | | | | | 1980 | | | |
| Thr | Tyr | Glu | Lys | Arg | Tyr | Ser | Ser | Pro | His | Gln | Ser | Leu | Leu | Ser |
| | 1985 | | | | | 1990 | | | | | 1995 | | | |
| Ile | Arg | Gly | Ser | Leu | Phe | Ser | Pro | Arg | Arg | Asn | Ser | Arg | Thr | Ser |
| | 2000 | | | | | 2005 | | | | | 2010 | | | |
| Leu | Phe | Ser | Phe | Arg | Gly | Arg | Ala | Lys | Asp | Val | Gly | Ser | Glu | Asn |
| | 2015 | | | | | 2020 | | | | | 2025 | | | |
| Asp | Phe | Ala | Asp | Asp | Glu | His | Ser | Thr | Phe | Glu | Asp | Asn | Glu | Ser |
| | 2030 | | | | | 2035 | | | | | 2040 | | | |
| Arg | Arg | Asp | Ser | Leu | Phe | Val | Pro | Arg | Arg | His | Gly | Glu | Arg | Arg |

2045

Asn Ser Asn Leu Ser Gln Thr Ser Arg Ser Ser Arg Met Leu Ala
2060 2065 2070

Val Phe Pro Ala Asn Gly Lys Met His Ser Thr Val Asp Cys Asn
2075 2080 2085

Gly Val Val Ser Leu Val Gly Gly Pro Ser Val Pro Thr Ser Pro
2090 2100

Val Gly Gln Leu Leu Pro Glu Val Ile Ile Asp Lys Pro Ala Thr
2105 2110 2115

Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu Met Arg Lys Arg Arg
2120 2125 2130

Ser Ser Ser Phe His Val Ser Met Asp Phe Leu Glu Asp Pro Ser
2135 2140 2145

Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu Thr Asn Thr
2150 2155 2160

Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro Cys Trp
2165 2170 2175

Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro Tyr
2180 2185 2190

Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
2195 2200 2205

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu
2210 2215 2220

Phe Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn
2225 2230 2235

Val Leu Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala
2240 2245 2250

Glu Met Phe Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe
2255 2260 2265

Gln Glu Gly Trp Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser
2270 2275 2280

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-------------|-----|-----|-----|-----|-----|-------------|-----|-----|-----|-----|-------------|-----|-----|-----|
| Leu 2285 | Val | Glu | Leu | Gly | Leu | Ala 2290 | Asn | Val | Glu | Gly | Leu 2295 | Ser | Val | Leu |
| Arg 2300 | Ser | Phe | Arg | Leu | Leu | Arg 2305 | Val | Phe | Lys | Leu | Ala 2310 | Lys | Ser | Trp |
| Pro 2315 | Thr | Leu | Asn | Met | Leu | Ile 2320 | Lys | Ile | Ile | Gly | Asn 2325 | Ser | Val | Gly |
| Ala 2330 | Leu | Gly | Asn | Leu | Thr | Leu 2335 | Val | Leu | Ala | Ile | Ile 2340 | Val | Phe | Ile |
| Phe 2345 | Ala | Val | Val | Gly | Met | Gln 2350 | Leu | Phe | Gly | Lys | Ser 2355 | Tyr | Lys | Asp |
| Cys 2360 | Val | Cys | Lys | Ile | Ala | Ser 2365 | Asp | Cys | Gln | Leu | Pro 2370 | Arg | Trp | His |
| Met 2375 | Asn | Asp | Phe | Phe | His | Ser 2380 | Phe | Leu | Ile | Val | Phe 2385 | Arg | Val | Leu |
| Cys 2390 | Gly | Glu | Trp | Ile | Glu | Thr 2395 | Met | Trp | Asp | Cys | Met 2400 | Glu | Val | Ala |
| Gly 2405 | Gln | Ala | Met | Cys | Leu | Thr 2410 | Val | Phe | Met | Met | Val 2415 | Met | Val | Ile |
| Gly 2420 | Asn | Leu | Val | Val | Leu | Asn 2425 | Leu | Phe | Leu | Ala | Leu 2430 | Leu | Leu | Ser |
| Ser 2435 | Phe | Ser | Ala | Asp | Asn | Leu 2440 | Ala | Ala | Thr | Asp | Asp 2445 | Asp | Asn | Glu |
| Met 2450 | Asn | Asn | Leu | Gln | Ile | Ala 2455 | Val | Asp | Arg | Met | His 2460 | Lys | Gly | Val |
| Ala 2465 | Tyr | Val | Lys | Arg | Lys | Ile 2470 | Tyr | Glu | Phe | Ile | Gln 2475 | Gln | Ser | Phe |
| Ile 2480 | Arg | Lys | Gln | Lys | Ile | Leu 2485 | Asp | Glu | Ile | Lys | Pro 2490 | Leu | Asp | Asp |
| Leu 2495 | Asn | Asn | Lys | Lys | Asp | Ser 2500 | Cys | Met | Ser | Asn | His 2505 | Thr | Thr | Glu |
| Ile 2510 | Gly | Lys | Asp | Leu | Asp | Tyr 2515 | Leu | Lys | Asp | Val | Asn 2520 | Gly | Thr | Thr |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile | Asp |
| | 2525 | | | | | 2530 | | | | | 2535 | | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val |
| | 2540 | | | | | 2545 | | | | | 2550 | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| | 2555 | | | | | 2560 | | | | | 2565 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| | 2570 | | | | | 2575 | | | | | 2580 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 2585 | | | | | 2590 | | | | | 2595 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 2600 | | | | | 2605 | | | | | 2610 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 2615 | | | | | 2620 | | | | | 2625 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 2630 | | | | | 2635 | | | | | 2640 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 2645 | | | | | 2650 | | | | | 2655 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 2660 | | | | | 2665 | | | | | 2670 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 2675 | | | | | 2680 | | | | | 2685 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 2690 | | | | | 2695 | | | | | 2700 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 2705 | | | | | 2710 | | | | | 2715 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 2720 | | | | | 2725 | | | | | 2730 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 2735 | | | | | 2740 | | | | | 2745 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 2750 | | | | | 2755 | | | | | 2760 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 2765 | | | | | 2770 | | | | | 2775 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 2780 | | | | | 2785 | | | | | 2790 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 2795 | | | | | 2800 | | | | | 2805 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 2810 | | | | | 2815 | | | | | 2820 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 2825 | | | | | 2830 | | | | | 2835 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 2840 | | | | | 2845 | | | | | 2850 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| | 2855 | | | | | 2860 | | | | | 2865 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| | 2870 | | | | | 2875 | | | | | 2880 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 2885 | | | | | 2890 | | | | | 2895 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 2900 | | | | | 2905 | | | | | 2910 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 2915 | | | | | 2920 | | | | | 2925 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 2930 | | | | | 2935 | | | | | 2940 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 2945 | | | | | 2950 | | | | | 2955 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 2960 | | | | | 2965 | | | | | 2970 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 2975 | | | | | 2980 | | | | | 2985 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |

| | | | | | | | | | | | | | | | |
|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| 2990 | Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 3005 | | | | | | 3010 | | | | | 3015 | | | |
| | Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 3020 | | | | | | 3025 | | | | | 3030 | | | |
| | Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 3035 | | | | | | 3040 | | | | | 3045 | | | |
| | Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 3050 | | | | | | 3055 | | | | | 3060 | | | |
| | Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 3065 | | | | | | 3070 | | | | | 3075 | | | |
| | Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 3080 | | | | | | 3085 | | | | | 3090 | | | |
| | Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 3095 | | | | | | 3100 | | | | | 3105 | | | |
| | Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 3110 | | | | | | 3115 | | | | | 3120 | | | |
| | Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 3125 | | | | | | 3130 | | | | | 3135 | | | |
| | Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 3140 | | | | | | 3145 | | | | | 3150 | | | |
| | Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 3155 | | | | | | 3160 | | | | | 3165 | | | |
| | Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 3170 | | | | | | 3175 | | | | | 3180 | | | |
| | Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 3185 | | | | | | 3190 | | | | | 3195 | | | |
| | Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 3200 | | | | | | 3205 | | | | | 3210 | | | |
| | Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 3215 | | | | | | 3220 | | | | | 3225 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| 3230 | | | | | | 3235 | | | | | 3240 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| 3245 | | | | | | 3250 | | | | | 3255 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| 3260 | | | | | | 3265 | | | | | 3270 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| 3275 | | | | | | 3280 | | | | | 3285 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| 3290 | | | | | | 3295 | | | | | 3300 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| 3305 | | | | | | 3310 | | | | | 3315 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| 3320 | | | | | | 3325 | | | | | 3330 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| 3335 | | | | | | 3340 | | | | | 3345 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| 3350 | | | | | | 3355 | | | | | 3360 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| 3365 | | | | | | 3370 | | | | | 3375 | | | |
| Ser | Phe | Thr | Tyr | Asn | Lys | Asn | Lys | Ile | Lys | Gly | Gly | Ala | Asn | Leu |
| 3380 | | | | | | 3385 | | | | | 3390 | | | |
| Leu | Ile | Lys | Glu | Asp | Met | Ile | Ile | Asp | Arg | Ile | Asn | Glu | Asn | Ser |
| 3395 | | | | | | 3400 | | | | | 3405 | | | |
| Ile | Thr | Glu | Lys | Thr | Asp | Leu | Thr | Met | Ser | Thr | Ala | Ala | Cys | Pro |
| 3410 | | | | | | 3415 | | | | | 3420 | | | |
| Pro | Ser | Tyr | Asp | Arg | Val | Thr | Lys | Pro | Ile | Val | Glu | Lys | His | Glu |
| 3425 | | | | | | 3430 | | | | | 3435 | | | |
| Gln | Glu | Gly | Lys | Asp | Glu | Lys | Ala | Lys | Gly | Lys | | | | |
| 3440 | | | | | | 3445 | | | | | | | | |

<210> 27
 <211> 2009
 <212> PRT

Updated Seq Listing2.ST25.txt

<213> homo sapiens

<400> 27

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Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Trp Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Updated Seq Listing2.ST25.txt

Ile Gln Ser Val Lys 245 Lys Leu Ser Asp Val 250 Met Ile Leu Thr Val 255 Phe

Cys Leu Ser Val 260 Phe Ala Leu Ile Gly 265 Leu Gln Leu Phe Met 270 Gly Asn

Leu Arg Asn 275 Lys Cys Ile Gln Trp 280 Pro Pro Thr Asn 285 Ala Ser Leu Glu

Glu His 290 Ser Ile Glu Lys Asn 295 Ile Thr Val Asn 300 Tyr Asn Gly Thr Leu

Ile 305 Asn Glu Thr Val Phe 310 Glu Phe Asp Trp Lys 315 Ser Tyr Ile Gln Asp 320

Ser Arg Tyr His 325 Tyr Phe Leu Glu Gly Phe 330 Leu Asp Ala Leu Leu Cys 335

Gly Asn Ser 340 Ser Asp Ala Gly Gln Cys 345 Pro Glu Gly Tyr Met 350 Cys Val

Lys Ala Gly 355 Arg Asn Pro Asn Tyr 360 Gly Tyr Thr Ser Phe 365 Asp Thr Phe

Ser Trp 370 Ala Phe Leu Ser Leu 375 Phe Arg Leu Met Thr 380 Gln Asp Phe Trp

Glu 385 Asn Leu Tyr Gln Leu 390 Thr Leu Arg Ala Ala 395 Gly Lys Thr Tyr Met 400

Ile Phe Phe Val 405 Leu Val Ile Phe Leu Gly 410 Ser Phe Tyr Leu Ile Asn 415

Leu Ile Leu Ala 420 Val Val Ala Met Ala 425 Tyr Glu Glu Gln Asn 430 Gln Ala

Thr Leu Glu 435 Glu Ala Glu Gln Lys 440 Glu Ala Glu Phe 445 Gln Gln Met Ile

Glu Gln 450 Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln 460 Ala Ala Thr Ala

Thr Ala 465 Ser Glu His Ser 470 Arg Glu Pro Ser Ala 475 Ala Gly Arg Leu Ser 480

Asp Ser Ser Ser 485 Glu Ala Ser Lys Leu Ser 490 Ser Lys Ser Ala 495 Lys Glu

Updated Seq Listing2.ST25.txt

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro

```

740
745
750
Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755
760
765
Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770
775
780
Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785
790
795
Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805
810
815
Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820
825
830
Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835
840
845
Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850
855
860
Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865
870
875
Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885
890
895
Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900
905
910
Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915
920
925
Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930
935
940
Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945
950
955
Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965
970
975
Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980
985
990

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Updated Seq Listing2.ST25.txt

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
 1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
 1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
 1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
 1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
 1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
 1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
 1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
 1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Arg
 1175 1180 1185

Phe Lys Cys Cys Gln Ile Asn Val Glu Glu Gly Arg Gly Lys Gln
 1190 1195 1200

Trp Trp Asn Leu Arg Arg Thr Cys Phe Arg Ile Val Glu His Asn
 1205 1210 1215

Trp Phe Glu Thr Phe Ile Val Phe Met Ile Leu Leu Ser Ser Gly
 1220 1225 1230

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |

| | | | | | | | | | | | | | | |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| 1700 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| | 1910 | | | | | 1915 | | | | | 1920 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| | 1925 | | | | | 1930 | | | | | 1935 | | | |

Updated Seq Listing2.ST25.txt

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 28
<211> 2009
<212> PRT
<213> homo sapiens

<400> 28

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Updated Seq Listing2.ST25.txt

```

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145                               150                               155                               160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Lys Lys Ile Ile Ala Arg
165                               170                               175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180                               185                               190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195                               200                               205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210                               215                               220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225                               230                               235

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245                               250                               255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260                               265                               270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275                               280                               285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290                               295                               300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305                               310                               315                               320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325                               330                               335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340                               345                               350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355                               360                               365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370                               375                               380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385                               390                               395                               400

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Updated Seq Listing2.ST25.txt

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Updated Seq Listing2.ST25.txt

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe

900

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 1160 | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 1400 | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| | 1415 | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| | 1430 | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 1445 | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 1460 | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |

1850

Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
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Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
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20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
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50

55

60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Arg Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Updated Seq Listing2.ST25.txt

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Updated Seq Listing2.ST25.txt

Gly Ser Leu Phe Ser 565 Pro Arg Arg Asn Ser 570 Arg Thr Ser Leu Phe Ser 575

Phe Arg Gly Arg 580 Ala Lys Asp Val Gly 585 Ser Glu Asn Asp Phe 590 Ala Asp

Asp Glu His 595 Ser Thr Phe Glu Asp 600 Asn Glu Ser Arg Arg 605 Asp Ser Leu

Phe Val 610 Pro Arg Arg His Gly 615 Glu Arg Arg Asn Ser 620 Asn Leu Ser Gln

Thr Ser Arg Ser Ser Arg 630 Met Leu Ala Val Phe 635 Pro Ala Asn Gly Lys 640

Met His Ser Thr Val 645 Asp Cys Asn Gly Val 650 Val Ser Leu Val Gly 655 Gly

Pro Ser Val 660 Pro Thr Ser Pro Val Gly 665 Gln Leu Leu Pro Glu 670 Val Ile

Ile Asp Lys 675 Pro Ala Thr Asp Asp 680 Asn Gly Thr Thr Thr 685 Glu Thr Glu

Met Arg 690 Lys Arg Arg Ser Ser 695 Ser Phe His Val Ser 700 Met Asp Phe Leu

Glu Asp Pro Ser Gln Arg 710 Gln Arg Ala Met Ser 715 Ile Ala Ser Ile Leu 720

Thr Asn Thr Val 725 Glu Glu Leu Glu Glu Ser 730 Arg Gln Lys Cys Pro 735 Pro

Cys Trp Tyr Lys 740 Phe Ser Asn Ile Phe 745 Leu Ile Trp Asp Cys 750 Ser Pro

Tyr Trp Leu 755 Lys Val Lys His Val 760 Val Asn Leu Val Val 765 Met Asp Pro

Phe Val 770 Asp Leu Ala Ile Thr 775 Ile Cys Ile Val Leu 780 Asn Thr Leu Phe

Met Ala Met Glu His Tyr 790 Pro Met Thr Asp His 795 Phe Asn Asn Val Leu 800

Thr Val Gly Asn 805 Leu Val Phe Thr Gly Ile 810 Phe Thr Ala Glu Met 815 Phe

Updated Seq Listing2.ST25.txt

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
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| | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|
| 1055 | | | | | | | | | | | | | |
| Ile | Gly | Lys | Asp | Leu | Asp | Tyr | Leu | Lys | Asp | Val | Asn | Gly | Thr |
| 1070 | | | | | | 1075 | | | | | 1080 | | |
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile |
| 1085 | | | | | | 1090 | | | | | 1095 | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr |
| 1100 | | | | | | 1105 | | | | | 1110 | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu |
| 1115 | | | | | | 1120 | | | | | 1125 | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys |
| 1130 | | | | | | 1135 | | | | | 1140 | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val |
| 1145 | | | | | | 1150 | | | | | 1155 | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu |
| 1160 | | | | | | 1165 | | | | | 1170 | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln |
| 1175 | | | | | | 1180 | | | | | 1185 | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys |
| 1190 | | | | | | 1195 | | | | | 1200 | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His |
| 1205 | | | | | | 1210 | | | | | 1215 | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser |
| 1220 | | | | | | 1225 | | | | | 1230 | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr |
| 1235 | | | | | | 1240 | | | | | 1245 | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile |
| 1250 | | | | | | 1255 | | | | | 1260 | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln |
| 1265 | | | | | | 1270 | | | | | 1275 | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val |
| 1280 | | | | | | 1285 | | | | | 1290 | | |

Updated Seq Listing2.ST25.txt

Val Ser Leu Val Ser Leu Thr Ala Asn Ala Leu Gly Tyr Ser Glu
 1295 1300 1305
 Leu Gly Ala Ile Lys Ser Leu Arg Thr Leu Arg Ala Leu Arg Pro
 1310 1315 1320
 Leu Arg Ala Leu Ser Arg Phe Glu Gly Met Arg Val Val Val Asn
 1325 1330 1335
 Ala Leu Leu Gly Ala Ile Pro Ser Ile Met Asn Val Leu Leu Val
 1340 1345 1350
 Cys Leu Ile Phe Trp Leu Ile Phe Ser Ile Met Gly Val Asn Leu
 1355 1360 1365
 Phe Ala Gly Lys Phe Tyr His Cys Ile Asn Thr Thr Thr Gly Asp
 1370 1375 1380
 Arg Phe Asp Ile Glu Asp Val Asn Asn His Thr Asp Cys Leu Lys
 1385 1390 1395
 Leu Ile Glu Arg Asn Glu Thr Ala Arg Trp Lys Asn Val Lys Val
 1400 1405 1410
 Asn Phe Asp Asn Val Gly Phe Gly Tyr Leu Ser Leu Leu Gln Val
 1415 1420 1425
 Ala Thr Phe Lys Gly Trp Met Asp Ile Met Tyr Ala Ala Val Asp
 1430 1435 1440
 Ser Arg Asn Val Glu Leu Gln Pro Lys Tyr Glu Lys Ser Leu Tyr
 1445 1450 1455
 Met Tyr Leu Tyr Phe Val Ile Phe Ile Ile Phe Gly Ser Phe Phe
 1460 1465 1470
 Thr Leu Asn Leu Phe Ile Gly Val Ile Ile Asp Asn Phe Asn Gln
 1475 1480 1485
 Gln Lys Lys Lys Phe Gly Gly Gln Asp Ile Phe Met Thr Glu Glu
 1490 1495 1500
 Gln Lys Lys Tyr Tyr Asn Ala Met Lys Lys Leu Gly Ser Lys Lys
 1505 1510 1515
 Pro Gln Lys Pro Ile Pro Arg Pro Gly Asn Lys Phe Gln Gly Met
 1520 1525 1530

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| | 1910 | | | | | 1915 | | | | | 1920 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| | 1925 | | | | | 1930 | | | | | 1935 | | | |
| Ser | Phe | Thr | Tyr | Asn | Lys | Asn | Lys | Ile | Lys | Gly | Gly | Ala | Asn | Leu |
| | 1940 | | | | | 1945 | | | | | 1950 | | | |
| Leu | Ile | Lys | Glu | Asp | Met | Ile | Ile | Asp | Arg | Ile | Asn | Glu | Asn | Ser |
| | 1955 | | | | | 1960 | | | | | 1965 | | | |
| Ile | Thr | Glu | Lys | Thr | Asp | Leu | Thr | Met | Ser | Thr | Ala | Ala | Cys | Pro |
| | 1970 | | | | | 1975 | | | | | 1980 | | | |
| Pro | Ser | Tyr | Asp | Arg | Val | Thr | Lys | Pro | Ile | Val | Glu | Lys | His | Glu |
| | 1985 | | | | | 1990 | | | | | 1995 | | | |

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
Page 145

2000

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35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
Page 146

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215

220

Lys Met Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460

Updated Seq Listing2.ST25.txt

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 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700
 Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720

Updated Seq Listing2.ST25.txt

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

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Trp Trp Asn Leu Arg Arg Thr Cys Phe Arg Ile Val Glu His Asn
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Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| 1490 | | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| 1505 | | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| 1520 | | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| 1535 | | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| 1550 | | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| 1655 | | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| | 1910 | | | | | 1915 | | | | | 1920 | | | |

Updated Seq Listing2.ST25.txt

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 31
<211> 2009
<212> PRT
<213> homo sapiens

<400> 31

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Updated Seq Listing2.ST25.txt

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140
 Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160
 Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175
 Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190
 Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205
 Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220
 Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Thr Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285
 Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300
 Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320
 Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335
 Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350
 Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp

370

375

380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620

Updated Seq Listing2.ST25.txt

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700
 Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720
 Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735
 Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750
 Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765
 Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780
 Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800
 Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815
 Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830
 Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845
 Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860
 Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880

Updated Seq Listing2.ST25.txt

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| | 1130 | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 1160 | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |

1355

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 1400 | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| | 1415 | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| | 1430 | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 1445 | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 1460 | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| 1655 | | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| 1700 | | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| 1715 | | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| 1745 | | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| 1760 | | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| 1775 | | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| 1790 | | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| 1805 | | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| 1820 | | | | | | 1825 | | | | | 1830 | | | |

Updated Seq Listing2.ST25.txt

Ala Leu Glu Pro Pro Leu Asn Leu Pro Gln Pro Asn Lys Leu Gln
1835 1840 1845

Leu Ile Ala Met Asp Leu Pro Met Val Ser Gly Asp Arg Ile His
1850 1855 1860

Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 32
<211> 2009
<212> PRT
<213> homo sapiens

<400> 32

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Updated Seq Listing2.ST25.txt

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45
 Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60
 Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80
 Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95
 Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110
 Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125
 Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140
 Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160
 Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175
 Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190
 Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205
 Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220
 Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285

Updated Seq Listing2.ST25.txt

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr

530

535

540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780

Updated Seq Listing2.ST25.txt

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe His Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ile | Arg | Lys | Gln | Lys | Ile | Leu | Asp | Glu | Ile | Lys | Pro | Leu | Asp | Asp |
| | 1040 | | | | | 1045 | | | | | 1050 | | | |
| Leu | Asn | Asn | Lys | Lys | Asp | Ser | Cys | Met | Ser | Asn | His | Thr | Thr | Glu |
| | 1055 | | | | | 1060 | | | | | 1065 | | | |
| Ile | Gly | Lys | Asp | Leu | Asp | Tyr | Leu | Lys | Asp | Val | Asn | Gly | Thr | Thr |
| | 1070 | | | | | 1075 | | | | | 1080 | | | |
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile | Asp |
| | 1085 | | | | | 1090 | | | | | 1095 | | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val |
| | 1100 | | | | | 1105 | | | | | 1110 | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| | 1115 | | | | | 1120 | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| | 1130 | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 1160 | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 1400 | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| | 1415 | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| | 1430 | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 1445 | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 1460 | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |

| | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-------------|
| 1505 | | | | | | | | | | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln Gly Met |
| 1520 | | | | | | 1525 | | | | | 1530 | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser Ile Met |
| 1535 | | | | | | 1540 | | | | | 1545 | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu Thr Asp |
| 1550 | | | | | | 1555 | | | | | 1560 | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile Asn Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys Leu Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile Phe Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu Ala Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg Val Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys Gly Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser Leu Pro |
| 1655 | | | | | | 1660 | | | | | 1665 | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met Phe Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys Arg Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly Asn Ser |
| 1700 | | | | | | 1705 | | | | | 1710 | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp Asp Gly |
| 1715 | | | | | | 1720 | | | | | 1725 | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys Asp Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| 1745 | | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| 1760 | | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| 1775 | | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| 1790 | | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| 1805 | | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| 1820 | | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| 1835 | | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| 1850 | | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| 1865 | | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| 1880 | | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| 1895 | | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| 1910 | | | | | | 1915 | | | | | 1920 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| 1925 | | | | | | 1930 | | | | | 1935 | | | |
| Ser | Phe | Thr | Tyr | Asn | Lys | Asn | Lys | Ile | Lys | Gly | Gly | Ala | Asn | Leu |
| 1940 | | | | | | 1945 | | | | | 1950 | | | |
| Leu | Ile | Lys | Glu | Asp | Met | Ile | Ile | Asp | Arg | Ile | Asn | Glu | Asn | Ser |
| 1955 | | | | | | 1960 | | | | | 1965 | | | |
| Ile | Thr | Glu | Lys | Thr | Asp | Leu | Thr | Met | Ser | Thr | Ala | Ala | Cys | Pro |
| 1970 | | | | | | 1975 | | | | | 1980 | | | |

Updated Seq Listing2.ST25.txt

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 33
<211> 2009
<212> PRT
<213> homo sapiens

<400> 33

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Updated Seq Listing2.ST25.txt

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Updated Seq Listing2.ST25.txt

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480
 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
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690

695

700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940

Updated Seq Listing2.ST25.txt

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Arg
1175 1180 1185

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| 1190 | | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| 1205 | | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| 1220 | | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Asp | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| 1490 | | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| 1505 | | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| 1520 | | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| 1535 | | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| 1550 | | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |

| | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-------------|
| 1655 | | | | | | | | | | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met Phe Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys Arg Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly Asn Ser |
| 1700 | | | | | | 1705 | | | | | 1710 | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp Asp Gly |
| 1715 | | | | | | 1720 | | | | | 1725 | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys Asp Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys Gly Asn |
| 1745 | | | | | | 1750 | | | | | 1755 | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile Ile Ser |
| 1760 | | | | | | 1765 | | | | | 1770 | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu Glu Asn |
| 1775 | | | | | | 1780 | | | | | 1785 | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser Glu Asp |
| 1790 | | | | | | 1795 | | | | | 1800 | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp Pro Asp |
| 1805 | | | | | | 1810 | | | | | 1815 | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe Ala Ala |
| 1820 | | | | | | 1825 | | | | | 1830 | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys Leu Gln |
| 1835 | | | | | | 1840 | | | | | 1845 | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg Ile His |
| 1850 | | | | | | 1855 | | | | | 1860 | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu Gly Glu |
| 1865 | | | | | | 1870 | | | | | 1875 | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu Arg Phe |
| 1880 | | | | | | 1885 | | | | | 1890 | |

Updated Seq Listing2.ST25.txt

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 34
<211> 2009
<212> PRT
<213> homo sapiens

<400> 34

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Updated Seq Listing2.ST25.txt

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Updated Seq Listing2.ST25.txt

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380
 Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400
 Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415
 Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480
 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Val | Pro | Arg | Arg | His | Gly | Glu | Arg | Arg | Asn | Ser | Asn | Leu | Ser | Gln |
| 610 | | | | | | 615 | | | | | 620 | | | | |
| Thr | Ser | Arg | Ser | Ser | Arg | Met | Leu | Ala | Val | Phe | Pro | Ala | Asn | Gly | Lys |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Met | His | Ser | Thr | Val | Asp | Cys | Asn | Gly | Val | Val | Ser | Leu | Val | Gly | Gly |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Pro | Ser | Val | Pro | Thr | Ser | Pro | Val | Gly | Gln | Leu | Leu | Pro | Glu | Val | Ile |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Ile | Asp | Lys | Pro | Ala | Thr | Asp | Asp | Asn | Gly | Thr | Thr | Thr | Glu | Thr | Glu |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Met | Arg | Lys | Arg | Arg | Ser | Ser | Ser | Phe | His | Val | Ser | Met | Asp | Phe | Leu |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Glu | Asp | Pro | Ser | Gln | Arg | Gln | Arg | Ala | Met | Ser | Ile | Ala | Ser | Ile | Leu |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Thr | Asn | Thr | Val | Glu | Glu | Leu | Glu | Glu | Ser | Arg | Gln | Lys | Cys | Pro | Pro |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Cys | Trp | Tyr | Lys | Phe | Ser | Asn | Ile | Phe | Leu | Ile | Trp | Asp | Cys | Ser | Pro |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Tyr | Trp | Leu | Lys | Val | Lys | His | Val | Val | Asn | Leu | Val | Val | Met | Asp | Pro |
| | | 755 | | | | | 760 | | | | | 765 | | | |
| Phe | Val | Asp | Leu | Ala | Ile | Thr | Ile | Cys | Ile | Val | Leu | Asn | Thr | Leu | Phe |
| | 770 | | | | | 775 | | | | | 780 | | | | |
| Met | Ala | Met | Glu | His | Tyr | Pro | Met | Thr | Asp | His | Phe | Asn | Asn | Val | Leu |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Thr | Val | Gly | Asn | Leu | Val | Phe | Thr | Gly | Ile | Phe | Thr | Ala | Glu | Met | Phe |
| | | | | 805 | | | | | 810 | | | | | 815 | |
| Leu | Lys | Ile | Ile | Ala | Met | Asp | Pro | Tyr | Tyr | Tyr | Phe | Gln | Glu | Gly | Trp |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| Asn | Ile | Phe | Asp | Gly | Phe | Ile | Val | Thr | Leu | Ser | Leu | Val | Glu | Leu | Gly |
| | | 835 | | | | | 840 | | | | | 845 | | | |
| Leu | Ala | Asn | Val | Glu | Gly | Leu | Ser | Val | Leu | Arg | Ser | Phe | Arg | Leu | Leu |

850

855

860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
 1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
 1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
 1085 1090 1095

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val |
| 1100 | | | | | | 1105 | | | | | 1110 | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| 1115 | | | | | | 1120 | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| 1130 | | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| 1145 | | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| 1160 | | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| 1175 | | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| 1190 | | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| 1205 | | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| 1220 | | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Gly | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 1400 | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| | 1415 | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| | 1430 | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 1445 | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 1460 | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |

Updated Seq Listing2.ST25.txt

1805

1810

1815

Ala Thr Gln Phe Met Glu Phe Glu Lys Leu Ser Gln Phe Ala Ala
1820 1825 1830

Ala Leu Glu Pro Pro Leu Asn Leu Pro Gln Pro Asn Lys Leu Gln
1835 1840 1845

Leu Ile Ala Met Asp Leu Pro Met Val Ser Gly Asp Arg Ile His
1850 1855 1860

Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

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<213> homo sapiens

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Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20                25                30
Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35                40                45
Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50                55                60
Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65                70                75                80
Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85                90                95
Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100               105               110
Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115               120               125
Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130               135               140
Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145               150               155               160
Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165               170               175
Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180               185               190
Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195               200               205
Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210               215               220
Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225               230               235               240
Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245               250               255

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Updated Seq Listing2.ST25.txt

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Updated Seq Listing2.ST25.txt

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Updated Seq Listing2.ST25.txt

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
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| | | | | | | | | | | | | | | | | | |
|-----|-------------|-----|-----|-----|-----|-------------|------|-----|-----|-----|-------------|-----|-----|-----|--|--|------|
| | 1010 | | | | | | 1015 | | | | | | | | | | 1020 |
| Ala | Tyr 1025 | Val | Lys | Arg | Lys | Ile 1030 | Tyr | Glu | Phe | Ile | Gln 1035 | Gln | Ser | Phe | | | |
| Ile | Arg 1040 | Lys | Gln | Lys | Ile | Leu 1045 | Asp | Glu | Ile | Lys | Pro 1050 | Leu | Asp | Asp | | | |
| Leu | Asn 1055 | Asn | Lys | Lys | Asp | Ser 1060 | Cys | Met | Ser | Asn | His 1065 | Thr | Thr | Glu | | | |
| Ile | Gly 1070 | Lys | Asp | Leu | Asp | Tyr 1075 | Leu | Lys | Asp | Val | Asn 1080 | Gly | Thr | Thr | | | |
| Ser | Gly 1085 | Ile | Gly | Thr | Gly | Ser 1090 | Ser | Val | Glu | Lys | Tyr 1095 | Ile | Ile | Asp | | | |
| Glu | Ser 1100 | Asp | Tyr | Met | Ser | Phe 1105 | Ile | Asn | Asn | Pro | Ser 1110 | Leu | Thr | Val | | | |
| Thr | Val 1115 | Pro | Ile | Ala | Val | Gly 1120 | Glu | Ser | Asp | Phe | Glu 1125 | Asn | Leu | Asn | | | |
| Thr | Glu 1130 | Asp | Phe | Ser | Ser | Glu 1135 | Ser | Asp | Leu | Glu | Glu 1140 | Ser | Lys | Glu | | | |
| Lys | Leu 1145 | Asn | Glu | Ser | Ser | Ser 1150 | Ser | Ser | Glu | Gly | Ser 1155 | Thr | Val | Asp | | | |
| Ile | Gly 1160 | Ala | Pro | Val | Glu | Glu 1165 | Gln | Pro | Val | Val | Glu 1170 | Pro | Glu | Glu | | | |
| Thr | Leu 1175 | Glu | Pro | Glu | Ala | Cys 1180 | Phe | Thr | Glu | Gly | Cys 1185 | Val | Gln | Arg | | | |
| Phe | Lys 1190 | Cys | Cys | Gln | Ile | Asn 1195 | Val | Glu | Glu | Gly | Arg 1200 | Gly | Lys | Gln | | | |
| Trp | Trp 1205 | Asn | Leu | Arg | Arg | Thr 1210 | Cys | Phe | Arg | Ile | Val 1215 | Glu | His | Asn | | | |
| Trp | Phe 1220 | Glu | Thr | Phe | Ile | Val 1225 | Phe | Met | Ile | Leu | Leu 1230 | Ser | Ser | Gly | | | |
| Ala | Leu 1235 | Ala | Phe | Glu | Asp | Ile 1240 | Tyr | Ile | Asp | Gln | Arg 1245 | Lys | Thr | Ile | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|------|
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | | | | 1260 |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Pro | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| | 1910 | | | | | 1915 | | | | | 1920 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| | 1925 | | | | | 1930 | | | | | 1935 | | | |
| Ser | Phe | Thr | Tyr | Asn | Lys | Asn | Lys | Ile | Lys | Gly | Gly | Ala | Asn | Leu |
| | 1940 | | | | | 1945 | | | | | 1950 | | | |
| Leu | Ile | Lys | Glu | Asp | Met | Ile | Ile | Asp | Arg | Ile | Asn | Glu | Asn | Ser |

1955

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

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<400> 36

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20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
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165

170

175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415

Updated Seq Listing2.ST25.txt

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480
 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670

Updated Seq Listing2.ST25.txt

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Updated Seq Listing2.ST25.txt

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
Page 200

| | | | | | | | | | | | | | | |
|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|
| 1160 | | | | | | | | | | | | | | |
| | | | | | | 1165 | | | | | | 1170 | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| 1490 | | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| 1505 | | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| 1520 | | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Val | Ser | Ile | Met |
| 1535 | | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| 1550 | | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |

Updated Seq Listing2.ST25.txt

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 37
<211> 2009
<212> PRT
<213> homo sapiens

<400> 37

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Updated Seq Listing2.ST25.txt

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys

325

330

335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575

Updated Seq Listing2.ST25.txt

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700
 Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720
 Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735
 Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750
 Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765
 Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780
 Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800
 Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815
 Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830

Updated Seq Listing2.ST25.txt

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845
 Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860
 Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880
 Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895
 Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910
 Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925
 Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940
 Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960
 Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975
 Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990
 Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005
 Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020
 Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035
 Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050
 Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
 1055 1060 1065
 Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
 1070 1075 1080

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile | Asp |
| | 1085 | | | | | 1090 | | | | | 1095 | | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val |
| | 1100 | | | | | 1105 | | | | | 1110 | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| | 1115 | | | | | 1120 | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| | 1130 | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 1160 | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |

| | | | | | | | | | | | | |
|------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|
| 1310 | | | | | | | | | | | | |
| | Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val |
| | 1325 | | | | | | 1330 | | | | | 1335 |
| | Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val |
| | 1340 | | | | | | 1345 | | | | | 1350 |
| | Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly |
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| | Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr |
| | 1370 | | | | | | 1375 | | | | | 1380 |
| | Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp |
| | 1385 | | | | | | 1390 | | | | | 1395 |
| | Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn |
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| | Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu |
| | 1415 | | | | | | 1420 | | | | | 1425 |
| | Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala |
| | 1430 | | | | | | 1435 | | | | | 1440 |
| | Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys |
| | 1445 | | | | | | 1450 | | | | | 1455 |
| | Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly |
| | 1460 | | | | | | 1465 | | | | | 1470 |
| | Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn |
| | 1475 | | | | | | 1480 | | | | | 1485 |
| | Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met |
| | 1490 | | | | | | 1495 | | | | | 1500 |
| | Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly |
| | 1505 | | | | | | 1510 | | | | | 1515 |
| | Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe |
| | 1520 | | | | | | 1525 | | | | | 1530 |
| | Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile |
| | 1535 | | | | | | 1540 | | | | | 1545 |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
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| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Gln | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| 1655 | | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
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| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| 1715 | | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| 1745 | | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| 1760 | | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| 1775 | | | | | | 1780 | | | | | 1785 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
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| 1790 | | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| 1805 | | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| 1820 | | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| 1835 | | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| 1850 | | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| 1865 | | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| 1880 | | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| 1895 | | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| 1910 | | | | | | 1915 | | | | | 1920 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| 1925 | | | | | | 1930 | | | | | 1935 | | | |
| Ser | Phe | Thr | Tyr | Asn | Lys | Asn | Lys | Ile | Lys | Gly | Gly | Ala | Asn | Leu |
| 1940 | | | | | | 1945 | | | | | 1950 | | | |
| Leu | Ile | Lys | Glu | Asp | Met | Ile | Ile | Asp | Arg | Ile | Asn | Glu | Asn | Ser |
| 1955 | | | | | | 1960 | | | | | 1965 | | | |
| Ile | Thr | Glu | Lys | Thr | Asp | Leu | Thr | Met | Ser | Thr | Ala | Ala | Cys | Pro |
| 1970 | | | | | | 1975 | | | | | 1980 | | | |
| Pro | Ser | Tyr | Asp | Arg | Val | Thr | Lys | Pro | Ile | Val | Glu | Lys | His | Glu |
| 1985 | | | | | | 1990 | | | | | 1995 | | | |
| Gln | Glu | Gly | Lys | Asp | Glu | Lys | Ala | Lys | Gly | Lys | | | | |
| 2000 | | | | | | 2005 | | | | | | | | |

<210> 38
<211> 2009

Updated Seq Listing2.ST25.txt

<212> PRT
<213> homo sapiens

<400> 38

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Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Updated Seq Listing2.ST25.txt

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
Page 214

485

490

495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700
 Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720
 Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735

Updated Seq Listing2.ST25.txt

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | | |
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| Ser | Ser | Phe | Ser | Ala | Asp | Asn | Leu | Ala | Ala | Thr | Asp | Asp | Asp | Asn | Glu |
| | | 995 | | | | | 1000 | | | | | 1005 | | | |
| Met | Asn | Asn | Leu | Gln | Ile | Ala | Val | Asp | Arg | Met | His | Lys | Gly | Val | |
| | 1010 | | | | | 1015 | | | | | 1020 | | | | |
| Ala | Tyr | Val | Lys | Arg | Lys | Ile | Tyr | Glu | Phe | Ile | Gln | Gln | Ser | Phe | |
| | 1025 | | | | | 1030 | | | | | 1035 | | | | |
| Ile | Arg | Lys | Gln | Lys | Ile | Leu | Asp | Glu | Ile | Lys | Pro | Leu | Asp | Asp | |
| | 1040 | | | | | 1045 | | | | | 1050 | | | | |
| Leu | Asn | Asn | Lys | Lys | Asp | Ser | Cys | Met | Ser | Asn | His | Thr | Thr | Glu | |
| | 1055 | | | | | 1060 | | | | | 1065 | | | | |
| Ile | Gly | Lys | Asp | Leu | Asp | Tyr | Leu | Lys | Asp | Val | Asn | Gly | Thr | Thr | |
| | 1070 | | | | | 1075 | | | | | 1080 | | | | |
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile | Asp | |
| | 1085 | | | | | 1090 | | | | | 1095 | | | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val | |
| | 1100 | | | | | 1105 | | | | | 1110 | | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn | |
| | 1115 | | | | | 1120 | | | | | 1125 | | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu | |
| | 1130 | | | | | 1135 | | | | | 1140 | | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp | |
| | 1145 | | | | | 1150 | | | | | 1155 | | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu | |
| | 1160 | | | | | 1165 | | | | | 1170 | | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg | |
| | 1175 | | | | | 1180 | | | | | 1185 | | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln | |
| | 1190 | | | | | 1195 | | | | | 1200 | | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn | |
| | 1205 | | | | | 1210 | | | | | 1215 | | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly | |
| | 1220 | | | | | 1225 | | | | | 1230 | | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
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| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
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| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
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| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |

1460

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| | 1685 | | | | | 1690 | | | | | 1695 | | | |

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Val | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |
| | 1910 | | | | | 1915 | | | | | 1920 | | | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys | Gln | Ala |
| | 1925 | | | | | 1930 | | | | | 1935 | | | |

Updated Seq Listing2.ST25.txt

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 39
<211> 2009
<212> PRT
<213> homo sapiens

<400> 39

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Updated Seq Listing2.ST25.txt

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Updated Seq Listing2.ST25.txt

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly

645

650

655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Updated Seq Listing2.ST25.txt

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|------|-----|-----|-----|
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | | 1150 | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 1160 | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | |
|---------|---------|---------|------|---------|---------|------|---------|-----|
| Arg Phe | Asp Ile | Glu Asp | Val | Asn Asn | His Thr | Asp | Cys Leu | Lys |
| 1385 | | | 1390 | | | 1395 | | |
| Leu Ile | Glu Arg | Asn Glu | Thr | Ala Arg | Trp Lys | Asn | Val Lys | Val |
| 1400 | | | 1405 | | | 1410 | | |
| Asn Phe | Asp Asn | Val Gly | Phe | Gly Tyr | Leu Ser | Leu | Leu Gln | Val |
| 1415 | | | 1420 | | | 1425 | | |
| Ala Thr | Phe Lys | Gly Trp | Met | Asp Ile | Met Tyr | Ala | Ala Val | Asp |
| 1430 | | | 1435 | | | 1440 | | |
| Ser Arg | Asn Val | Glu Leu | Gln | Pro Lys | Tyr Glu | Lys | Ser Leu | Tyr |
| 1445 | | | 1450 | | | 1455 | | |
| Met Tyr | Leu Tyr | Phe Val | Ile | Phe Ile | Ile Phe | Gly | Ser Phe | Phe |
| 1460 | | | 1465 | | | 1470 | | |
| Thr Leu | Asn Leu | Phe Ile | Gly | Val Ile | Ile Asp | Asn | Phe Asn | Gln |
| 1475 | | | 1480 | | | 1485 | | |
| Gln Lys | Lys Lys | Phe Gly | Gly | Gln Asp | Ile Phe | Met | Thr Glu | Glu |
| 1490 | | | 1495 | | | 1500 | | |
| Gln Lys | Lys Tyr | Tyr Asn | Ala | Met Lys | Lys Leu | Gly | Ser Lys | Lys |
| 1505 | | | 1510 | | | 1515 | | |
| Pro Gln | Lys Pro | Ile Pro | Arg | Pro Gly | Asn Lys | Phe | Gln Gly | Met |
| 1520 | | | 1525 | | | 1530 | | |
| Val Phe | Asp Phe | Val Thr | Arg | Gln Val | Phe Asp | Ile | Ser Ile | Met |
| 1535 | | | 1540 | | | 1545 | | |
| Ile Leu | Ile Cys | Leu Asn | Met | Val Thr | Met Met | Val | Glu Thr | Asp |
| 1550 | | | 1555 | | | 1560 | | |
| Asp Gln | Ser Glu | Tyr Val | Thr | Thr Ile | Leu Ser | Arg | Ile Asn | Leu |
| 1565 | | | 1570 | | | 1575 | | |
| Val Phe | Ile Val | Leu Phe | Thr | Gly Glu | Cys Val | Leu | Lys Leu | Ile |
| 1580 | | | 1585 | | | 1590 | | |
| Ser Leu | Arg His | Tyr Tyr | Phe | Thr Ile | Gly Trp | Asn | Ile Phe | Asp |
| 1595 | | | 1600 | | | 1605 | | |
| Phe Val | Val Val | Ile Leu | Ser | Ile Val | Gly Met | Phe | Leu Ala | Glu |

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Updated Seq Listing2.ST25.txt

Leu Ile Ala Met Asp Leu Pro Met Val Ser Gly Asp Arg Ile His
1850 1855 1860

Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 40
<211> 90
<212> PRT
<213> homo sapiens

<400> 40

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Ser Thr Ser
1 5 10 15

Ser Pro Glu Asn Leu Leu Arg Leu Leu Lys Asp Ala Leu Gln Lys Lys
20 25 30

Arg Gln Arg Ile Pro Asn Gln Thr Lys Lys Met Thr Thr Lys Met Ala
35 40 45

Updated Seq Listing2.ST25.txt

Gln Ser Gln Ile Val Thr Trp Lys Leu Glu Arg Thr Phe His Leu Phe
50 55 60

Met Glu Thr Phe Leu Gln Arg Trp Cys Gln Ser Pro Trp Arg Thr Trp
65 70 75 80

Thr Pro Thr Ile Ser Ile Arg Lys Leu Leu
85 90

<210> 41
<211> 169
<212> PRT
<213> homo sapiens

<400> 41

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Ser Glu Ser Phe
165

Updated Seq Listing2.ST25.txt

<210> 42
 <211> 621
 <212> PRT
 <213> homo sapiens

<400> 42

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
 1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
 20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220

Updated Seq Listing2.ST25.txt

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285
 Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300
 Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320
 Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335
 Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350
 Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380
 Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400
 Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415
 Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480

Updated Seq Listing2.ST25.txt

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Tyr Phe His Gln Gly Glu Ile Ala Glu Gln Ala Phe Ser Ala
565 570 575

Leu Glu Gly Glu Gln Arg Met Trp Asp Leu Arg Thr Thr Ser Gln Met
580 585 590

Met Ser Thr Ala Pro Leu Arg Ile Thr Arg Ala Val Glu Ile Pro Cys
595 600 605

Leu Cys Pro Asp Asp Thr Glu Arg Asp Ala Thr Ala Thr
610 615 620

<210> 43
<211> 1078
<212> PRT
<213> homo sapiens
<400> 43

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Updated Seq Listing2.ST25.txt

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Updated Seq Listing2.ST25.txt

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp

580

585

590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830

Updated Seq Listing2.ST25.txt

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Met
1070 1075

Updated Seq Listing2.ST25.txt

<210> 44
 <211> 1214
 <212> PRT
 <213> homo sapiens

<400> 44

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
 1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
 20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220

Updated Seq Listing2.ST25.txt

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285
 Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300
 Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320
 Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335
 Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350
 Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380
 Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400
 Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415
 Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480

Updated Seq Listing2.ST25.txt

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro

725

730

735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975

Updated Seq Listing2.ST25.txt

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Ile
1175 1180 1185

Gln Val Leu Ser Asn Gln Cys Gly Arg Arg Gln Arg Lys Thr Met
1190 1195 1200

Val Glu Pro Glu Lys Asp Val Phe Pro Asn Ser
1205 1210

Updated Seq Listing2.ST25.txt

<210> 45
 <211> 1358
 <212> PRT
 <213> homo sapiens

<400> 45

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
 1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
 20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220

Updated Seq Listing2.ST25.txt

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285
 Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300
 Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320
 Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335
 Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350
 Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380
 Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400
 Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415
 Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480

Updated Seq Listing2.ST25.txt

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
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725

730

735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975

Updated Seq Listing2.ST25.txt

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
 1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
 1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
 1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
 1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
 1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
 1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
 1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
 1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Arg
 1175 1180 1185

Phe Lys Cys Cys Gln Ile Asn Val Glu Glu Gly Arg Gly Lys Gln
 1190 1195 1200

Trp Trp Asn Leu Arg Arg Thr Cys Phe Arg Ile Val Glu His Asn
 1205 1210 1215

Updated Seq Listing2.ST25.txt

Trp Phe Glu Thr Phe Ile Val Phe Met Ile Leu Leu Ser Ser Gly
1220 1225 1230

Ala Leu Ala Phe Glu Asp Ile Tyr Ile Asp Gln Arg Lys Thr Ile
1235 1240 1245

Lys Thr Met Leu Glu Tyr Ala Asp Lys Val Phe Thr Tyr Ile Phe
1250 1255 1260

Ile Leu Glu Met Leu Leu Lys Trp Val Ala Tyr Gly Tyr Gln Thr
1265 1270 1275

Tyr Phe Thr Asn Ala Trp Cys Trp Leu Asp Phe Leu Ile Val Asp
1280 1285 1290

Val Ser Leu Val Ser Leu Thr Ala Asn Ala Leu Gly Tyr Ser Glu
1295 1300 1305

Leu Gly Ala Ile Lys Ser Leu Arg Thr Leu Arg Ala Leu Arg Pro
1310 1315 1320

Leu Arg Ala Leu Ser Arg Phe Glu Gly Met Arg Val Val Val Asn
1325 1330 1335

Ala Leu Leu Gly Ala Ile Pro Ser Ile Met Asn Val Leu Leu Val
1340 1345 1350

Cys Leu Tyr Ser Gly
1355

<210> 46
<211> 1510
<212> PRT
<213> homo sapiens
<400> 46

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Updated Seq Listing2.ST25.txt

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80
 Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95
 Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110
 Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125
 Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140
 Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160
 Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175
 Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190
 Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205
 Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220
 Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285
 Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300
 Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320

Updated Seq Listing2.ST25.txt

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser

565

570

575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
 725 730

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815

Updated Seq Listing2.ST25.txt

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ile | Gly | Lys | Asp | Leu | Asp | Tyr | Leu | Lys | Asp | Val | Asn | Gly | Thr | Thr |
| | 1070 | | | | | 1075 | | | | | 1080 | | | |
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile | Asp |
| | 1085 | | | | | 1090 | | | | | 1095 | | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val |
| | 1100 | | | | | 1105 | | | | | 1110 | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| | 1115 | | | | | 1120 | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| | 1130 | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| | 1160 | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| | 1175 | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| | 1190 | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| | 1205 | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |

Updated Seq Listing2.ST25.txt

Leu Gly Ala Ile Lys Ser Leu Arg Thr Leu Arg Ala Leu Arg Pro
1310 1315 1320

Leu Arg Ala Leu Ser Arg Phe Glu Gly Met Arg Val Val Val Asn
1325 1330 1335

Ala Leu Leu Gly Ala Ile Pro Ser Ile Met Asn Val Leu Leu Val
1340 1345 1350

Cys Leu Ile Phe Trp Leu Ile Phe Ser Ile Met Gly Val Asn Leu
1355 1360 1365

Phe Ala Gly Lys Phe Tyr His Cys Ile Asn Thr Thr Thr Gly Asp
1370 1375 1380

Arg Phe Asp Ile Glu Asp Val Asn Asn His Thr Asp Cys Leu Lys
1385 1390 1395

Leu Ile Glu Arg Asn Glu Thr Ala Arg Trp Lys Asn Val Lys Val
1400 1405 1410

Asn Phe Asp Asn Val Gly Phe Gly Tyr Leu Ser Leu Leu Gln Val
1415 1420 1425

Ala Thr Phe Lys Gly Trp Met Asp Ile Met Tyr Ala Ala Val Asp
1430 1435 1440

Ser Arg Asn Val Glu Leu Gln Pro Lys Tyr Glu Lys Ser Leu Tyr
1445 1450 1455

Met Tyr Leu Tyr Phe Val Ile Phe Ile Ile Phe Gly Ser Phe Phe
1460 1465 1470

Thr Leu Asn Leu Phe Ile Gly Val Ile Ile Asp Asn Phe Asn Gln
1475 1480 1485

Gln Lys Lys Lys Phe Gly Gly Gln Asp Ile Phe Met Thr Glu Glu
1490 1495 1500

Gln Lys Lys Tyr Tyr Met Gln
1505 1510

<210> 47
<211> 1007
<212> PRT
<213> homo sapiens

Updated Seq Listing2.ST25.txt

<400> 47

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
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245

250

255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495

Updated Seq Listing2.ST25.txt

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Updated Seq Listing2.ST25.txt

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765
 Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780
 Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800
 Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815
 Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830
 Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845
 Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860
 Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880
 Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895
 Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910
 Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925
 Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940
 Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960
 Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975
 Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990
 Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn
 995 1000 1005

Updated Seq Listing2.ST25.txt

<210> 48
 <211> 1426
 <212> PRT
 <213> homo sapiens

<400> 48

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
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Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
 20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220

Updated Seq Listing2.ST25.txt

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
Page 260

465 470 475 480
 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640
 Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
 645 650 655
 Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
 660 665 670
 Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
 675 680 685
 Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
 690 695 700
 Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
 705 710 715 720

Updated Seq Listing2.ST25.txt

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Updated Seq Listing2.ST25.txt

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Arg
1175 1180 1185

Phe Lys Cys Cys Gln Ile Asn Val Glu Glu Gly Arg Gly Lys Gln
1190 1195 1200

Trp Trp Asn Leu Arg Arg Thr Cys Phe Arg Ile Val Glu His Asn
1205 1210 1215

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| | 1220 | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| | 1235 | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| | 1250 | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| | 1265 | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| | 1280 | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 1400 | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | | |
| | 1415 | | | | | 1420 | | | | | 1425 | | | |

<210> 49
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 <212> DNA
 <213> homo sapiens

Updated Seq Listing2.ST25.txt

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tctacctaat aaatttgatc ctggctgtgg tggccatggc ctacaggaa cagaatcagg 1560
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agagtgctaa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg 1800
gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga 1860

Updated Seq Listing2.ST25.txt

| | |
|---|------|
| aagggttttcg cttctccatt gaaggggaacc gattgacata tgaaaagagg tactcctccc | 1920 |
| cacaccagtc tttgttgagc atccgtggct ccctattttc accaaggcga aatagcagaa | 1980 |
| caagcctttt cagctttaga gggcgagcaa aggatgtggg atctgagaac gacttcgcag | 2040 |
| atgatgagca cagcaccttt gaggataacg agagccgtag agattccttg tttgtgcccc | 2100 |
| gacgacacgg agagagacgc aacagcaacc tgagtcagac cagtaggtca tcccggatgc | 2160 |
| tggcagtgtt tccagcgaat gggaagatgc acagcactgt ggattgcaat ggtgtggttt | 2220 |
| ccttggttgg tggaccttca gttcctacat cgcctgttgg acagcttctg ccagaggtga | 2280 |
| taatagataa gccagctact gatgacaatg gaacaaccac tgaaactgaa atgagaaaga | 2340 |
| gaagggtcaag ttctttccac gtttccatgg actttctaga agatccttcc caaaggcaac | 2400 |
| gagcaatgag tatagccagc attctaacaa atacagtaga agaacttgaa gaatccaggc | 2460 |
| agaaatgccc accctgttgg tataaatttt ccaacatatt cttaatctgg gactgttctc | 2520 |
| catattgggt aaaagtgaaa catgttgtca acctgggtgt gatggacca tttgttgacc | 2580 |
| tggccatcac catctgtatt gtcttaaata ctcttttcat ggccatggag cactatccaa | 2640 |
| tgacggacca tttcaataat gtgcttacag taggaaactt ggttttcact gggatcttta | 2700 |
| cagcagaaat gtttctgaaa attattgcc a tggatcctta ctattatttc caagaaggct | 2760 |
| ggaatatctt tgacgggtttt attgtgacgc ttagcctggg agaacttgga ctgcaccaatg | 2820 |
| tggaaggatt atctgttctc cgttcatttc gattgctgcg agttttcaag ttggcaaaat | 2880 |
| cttgccaac gttaaataatg ctaataaaga tcacggcaa ttccgtgggg gctctgggaa | 2940 |
| atttaaccct cgtcttggcc atcatcgtct tcatttttgc cgtggtcggc atgcagctct | 3000 |
| ttggtaaaag ctacaaagat tgtgtctgca agatcgccag tgattgtcaa ctcccacgct | 3060 |
| ggcacatgaa tgacttcttc cactccttcc tgattgtgtt ccgctgtctg tgtggggagt | 3120 |
| ggatagagac catgtgggac tgtatggagg ttgctggtca agccatgtgc ctactgtct | 3180 |
| tcatgatggt catggtgatt ggaaacctag tggcctgaa tctctttctg gccttgcttc | 3240 |
| tgagctcatt tagtgcagac aaccttgag ccactgatga tgataatgaa atgaataatc | 3300 |
| tccaaattgc tgtggatagg atgcacaaag gagtagctta tgtgaaaaga aaaatatatg | 3360 |
| aatttattca acagtccttc attaggaaac aaaagatttt agatgaaatt aaaccacttg | 3420 |
| atgatctaaa caacaagaaa gacagttgta tgtccaatca tacaacagaa attgggaaag | 3480 |
| atcttgacta tcttaaagat gtaaattggaa ctacaagtgg tataggaact ggcagcagt | 3540 |
| ttgaaaaata cattattgat gaaagtgatt acatgtcatt cataaacaac cccagtctta | 3600 |
| ctgtgactgt accaattgct gtaggagaat ctgactttga aaatttaaac acggaagact | 3660 |
| ttagtagtga atcggatctg gaagaaaagca aagagaaaact gaatgaaagc agtagctcat | 3720 |
| cagaaggtag cactgtggac atcggcgcac ctgtagaaga acagcccgtg gtggaacctg | 3780 |

Updated Seq Listing2.ST25.txt

| | |
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| tccgaatagt tgaacataac tggtttgaga ccttcattgt tttcatgatt ctccttagta | 3960 |
| gtggtgctct ggcatttgaa gatatatata ttgatcagcg aaagacgatt aagacgatgt | 4020 |
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| tggcatatgg ctatcaaaca tatttcacca atgcctggtg ttggctggac ttcttaattg | 4140 |
| ttgatgtttc attggtcagt ttaacagcaa atgccttggg ttactcagaa cttggagcca | 4200 |
| tcaaactctc caggacacta agagctctga gacctctaag agccttatct cgatttgaag | 4260 |
| ggatgagggg ggttggtgaat gcccttttag gagcaattcc atccatcatg aatgtgcttc | 4320 |
| tggtttgtct tatattctgg ctaattttca gcatcatggg cgtaaatttg tttgctggca | 4380 |
| aattctacca ctgtattaac accacaactg gtgacagggt tgacatcgaa gacgtgaata | 4440 |
| atcatactga ttgcctaaaa ctaatagaaa gaaatgagac tgctcgatgg aaaaatgtga | 4500 |
| aagtaaactt tgataatgta ggatttgggt atctctcttt gcttcaagtt gccacattca | 4560 |
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| aaaaattagg atcgaaaaaa ccgcaaaagc ctatacctcg accaggaaac aaatttcaag | 4860 |
| gaatggtcct tgacttcgta accagacaag tttttgacat aagcatcatg attctcatct | 4920 |
| gtcttaacat ggtcacaatg atggtggaaa cagatgacca gagtgaatat gtgactacca | 4980 |
| ttttgtcacg catcaatctg gtgttcattg tgctatttac tggagagtgt gtactgaaac | 5040 |
| tcatctctct acgccattat tattttacca ttggatggaa tatttttgat tttgtggttg | 5100 |
| tcattctctc cattgtaggt atgtttcttg ccgagctgat agaaaagtat ttcgtgtccc | 5160 |
| ctaccctgtt ccgagtgatc cgtcttgcta ggattggccg aatcctacgt ctgatcaaag | 5220 |
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| acagcatgat ctgcctattc caaattacaa cctctgctgg ctgggatgga ttgctagcac | 5460 |
| ccatttcaa cagtaagcca cccgactgtg accctaataa agttaaccct ggaagctcag | 5520 |
| ttaagggaga ctgtgggaac ccatctgttg gaattttctt tttgtcagt tacatcatca | 5580 |
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Updated Seq Listing2.ST25.txt

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| cagctgcgct tgaaccgcct ctcaatctgc cacaaccaa caaactccag ctcattgcc | 5820 |
| tggatttgcc catggtgagt ggtgaccgga tccactgtct tgatatctta tttgctttta | 5880 |
| caaagcgggt tctaggagag agtggagaga tggatgtctt acgaatacag atggaagagc | 5940 |
| gattcatggc ttccaatcct tccaaggctt cctatcagcc aatcactact actttaaaac | 6000 |
| gaaaacaaga ggaagtatct gctgtcatta ttcagcgtgc ttacagacgc caccttttaa | 6060 |
| agcgaactgt aaaacaagct tcctttacgt acaataaaaa caaatcaaa ggtggggcta | 6120 |
| atcttcttat aaaagaagac atgataattg acagaataaa tgaaaactct attacagaaa | 6180 |
| aaactgatct gaccatgtcc actgcagctt gtccaccttc ctatgaccgg gtgacaaagc | 6240 |
| caattgtgga aaaacatgag caagaaggca aagatgaaaa agccaaaggg aaataaatga | 6300 |
| aaataaataa aaataattgg gtgacaaatt gtttacagcc tgtgaagggtg atgtattttt | 6360 |
| atcaacagga ctcccttagg aggtcaatgc caaactgact gtttttacac aaatctcctt | 6420 |
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| ggggagatga ccttgacagg aggttactgt tctcactacc agctgacact gctgaagata | 6540 |
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| gacctctata acaggatgc cacctggggg gtatggcaac cacatggccc tcccagctac | 6840 |
| acaaagtcgt ggtttgcatg agggcatgct gcacttagag atcatgcatg agaaaaagtc | 6900 |
| acaagaaaaa caaattctta aatttcacca ttttctggg aggggtaatt ggggtgataag | 6960 |
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| tgttatgttt ctttttgttg tattaataaaa aaaacctgaa tagtgaatat tgcccctcac | 7140 |
| cctccaccgc cagaagactg aattgaccaa aattactctt tataaatttc tgctttttcc | 7200 |
| tgcactttgt ttagccatct ttgggctctc agcaagggtg acactgtata tgttaatgaa | 7260 |
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| ctttacacag gtaataaaat gtattctgta ccatttatag atagtttgga tgctatcaat | 7440 |
| gcatgtttat attaccatgc tgctgtatct ggtttctctc actgctcaga atctcattta | 7500 |
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Updated Seq Listing2.ST25.txt

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| acctattaaa tatgtgttta gaattttata agcaaatata aatactgtaa aaagtcactt | 7740 |
| tattttatTTT ttcagcatta tgtacataaa tatgaagagg aaattatctt caggttgata | 7800 |
| tcacaatcac ttttcttact ttctgtccat agtacttttt catgaaagaa atttgctaaa | 7860 |
| taagacatga aaacaagact gggtagttgt agatttctgc tttttaaaatt acatttgcta | 7920 |
| atttttagatt atttcacaat tttaaggagc aaaatagggt cactgattcat atccaaatta | 7980 |
| tgctttgcaa ttggaaaagg gtttaaaatt ttatttatat ttctggtagt acctgtacta | 8040 |
| actgaattga aggtagtgtt tatgttattt ttgttctttt tttctgactt cggtttatgt | 8100 |
| tttcatttct ttggagtaat gctgctctag attgttctaa atagaatgtg ggcttcataa | 8160 |
| tttttttttc cacaaaaaca gagtagtcaa cttatatagt caattacatc aggacatttt | 8220 |
| gtgtttctta cagaagcaaa ccataggctc ctcttttctt taaaactact tagataaact | 8280 |
| gtattcgtga actgcatgct ggaaaatgct actattatgc taaataatgc taaccaacat | 8340 |
| ttaaaatgtg caaaactaat aaagattaca ttttttattt t | 8381 |

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<211> 8381

<212> DNA

<213> homo sapiens

<400> 50

| | |
|--|-----|
| atactgcaga ggtctctggt gcatgtgtgt atgtgtgctt ttgtgtgtgt ttgtgtgtct | 60 |
| gtgtgtttctg cccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctctgtctttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa tttcatatgc agaataaatg | 240 |
| gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtagca ccaggacctg | 300 |
| acagcttcaa cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag | 360 |
| aaaaggcaaa gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa | 420 |
| atagtgactt ggaagctgga aagaacctt catttattta tggagacatt cctccagaga | 480 |
| tggtgtcaga gccctggag gacctggacc cctactatat caataagaaa acttttatag | 540 |
| tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa | 600 |
| ctcccttcaa tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca | 660 |
| tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg | 720 |
| attggacaaa gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa | 780 |
| aaattattgc aaggggattc tgtttagaag attttacttt ctttcgggat ccatggaact | 840 |

Updated Seq Listing2.ST25.txt

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| tctcggcatt gagaacattc agagtctctc gagcattgaa gacgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggtttttttag | 1260 |
| atgcactact atgtggaaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |
| tacgtgctgc tgggaaaacg tacatgatat tttttgtatt ggtcattttc ttgggctcat | 1500 |
| tctacctaataaat ttgatc ctggctgtgg tggccatggc ctacaggaa cagaatcagg | 1560 |
| ccaccttggga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta | 1620 |
| aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag | 1680 |
| agcccagtgac agcaggcagg ctctcagaca gctcatctga agcctctaag ttgagttcca | 1740 |
| agagtgtctaa ggaaagaaga aatcggagga agaaaagaaa acagaaagag cagtctggtg | 1800 |
| gggaagagaa agatgaggat gaattccaaa aatctgaatc tgaggacagc atcaggagga | 1860 |
| aagggttttcg cttctccatt gaagggaacc gattgacata tgaaaagagg tactcctccc | 1920 |
| cacaccagtc tttgttgagc atccgtggct ccctattttc accaaggcga aatagcagaa | 1980 |
| caagcctttt cagcttttaga gggcgagcaa aggatgtggg atctgagaac gacttcgcag | 2040 |
| atgatgagca cagcaccttt gaggataacg agagccgtag agattccttg tttgtgcccc | 2100 |
| gacgacacgg agagagacgc aacagcaacc tgagtcagac cagtaggtca tcccggatgc | 2160 |
| tggcagtgtt tccagcgaat gggaagatgc acagcactgt ggattgcaat ggtgtggttt | 2220 |
| ccttggttgg tggaccttca gttcctacat cgcctgttgg acagcttctg ccagagggtga | 2280 |
| taatagataa gccagctact gatgacaatg gaacaaccac tgaaactgaa atgagaaaga | 2340 |
| gaagggtcaag ttctttccac gtttccatgg actttctaga agatccttc caaaggcaac | 2400 |
| gagcaatgag tatagccagc attctaacaa atacagtaga agaacttgaa gaatccaggc | 2460 |
| agaaatgccc accctgttgg tataaatttt ccaacatatt cttaatctgg gactgttctc | 2520 |
| catattgggtt aaaagtgaaa catgttgtca acctgggtgt gatggacca tttgttgacc | 2580 |
| tggccatcac catctgtatt gtcttaaata ctcttttcat ggccatggag cactatccaa | 2640 |
| tgacggacca tttcaataat gtgcttacag taggaaactt ggttttcact gggatcttta | 2700 |

Updated Seq Listing2.ST25.txt

| | |
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| ggaatatctt tgacggtttt attgtgacgc ttagcctggg agaacttgga ctcgccaatg | 2820 |
| tggaggatt atctgttctc cgttcatttc gattgctgcg agttttcaag ttggcaaaat | 2880 |
| cttggccaac gttaaataatg ctaataaaga tcatcgga tccgtgggg gctctgggaa | 2940 |
| atttaaccct cgtcttggcc atcatcgtct tcatttttgc cgtggtcggc atgcagctct | 3000 |
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Updated Seq Listing2.ST25.txt

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| aaactgatct gaccatgtcc actgcagctt gtccaccttc ctatgaccgg gtgacaaagc | 6240 |
| caattgtgga aaaacatgag caagaaggca aagatgaaaa agccaaaggg aaataaatga | 6300 |
| aaataaataa aaataattgg gtgacaaatt gtttacagcc tgtgaagggtg atgtattttt | 6360 |
| atcaacagga ctccttttagg aggtcaatgc caaactgact gtttttacac aaatctcctt | 6420 |
| aaggtcagtg cctacaataa gacagtgacc ccttgtcagc aaactgtgac tctgtgtaaa | 6480 |

Updated Seq Listing2.ST25.txt

| | |
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| ggggagatga ccttgacagg aggttactgt tctcactacc agctgacact gctgaagata | 6540 |
| agatgcacaa tggctagtca gactgtaggg accagtttca aggggtgcaa acctgtgatt | 6600 |
| ttggggttgt ttaacatgaa acactttagt gtagtaattg tatccactgt ttgcatttca | 6660 |
| actgccacat ttgtcacatt tttatggaat ctgttagtgg attcatcttt ttgttaatcc | 6720 |
| atgtgtttat tatatgtgac tttttttgta aacgaagttt ctgttgagaa ataggctaag | 6780 |
| gacctctata acaggatgac cacctggggg gtatggcaac cacatggccc tcccagctac | 6840 |
| acaaagtcgt ggtttgcatg agggcatgct gcacttagag atcatgcatg agaaaaagtc | 6900 |
| acaagaaaaa caaattctta aatttcacca tttttctggg aggggtaatt gggtgataag | 6960 |
| tggagggtgct ttgttgatct tgttttgcga aatccagccc ctagaccaag tagattattt | 7020 |
| gtgggtaggc cagtaaatct tagcagggtgc aaacttcatt caaatgtttg gagtcataaa | 7080 |
| tgttatgttt ctttttgttg tattaaaaaa aaaacctgaa tagtgaatat tgcccctcac | 7140 |
| cctccaccgc cagaagactg aattgacaa aattactctt tataaatttc tgctttttcc | 7200 |
| tgcactttgt ttagccatct ttgggctctc agcaaggttg aactgtata tgtaaatgaa | 7260 |
| atgctattta ttatgtaaag agtcatttta ccctgtggtg cacgtttgag caaacaata | 7320 |
| atgacctaaag cacagtattt attgcatcaa atatgtacca caagaaatgt agagtgaag | 7380 |
| ctttacacag gtaataaaat gtattctgta ccatttatag atagtttgga tgctatcaat | 7440 |
| gcatgtttat attaccatgc tgctgtatct ggtttctctc actgctcaga atctcattta | 7500 |
| tgagaaacca tatgtcagtg gtaaagtcga ggaaattgtt caacagatct cttttattta | 7560 |
| agtcattaag caatagtttg cagcacttta acagcttttt ggttattttt acattttaag | 7620 |
| tggataacat atggtatata gccagactgt acagacatgt ttaaaaaaac aactgtctta | 7680 |
| acctattaaa tatgtgttta gaattttata agcaaatata aatactgtaa aaagtcactt | 7740 |
| tattttattt ttcagcatta tgtacataaa tatgaagagg aaattatctt cagggtgata | 7800 |
| tcacaatcac ttttcttact ttctgtccat agtacttttt catgaaagaa atttgctaaa | 7860 |
| taagacatga aaacaagact gggtagtgtg agatttctgc tttttaaatt acatttgcta | 7920 |
| atttttagatt atttcacaat tttaaggagc aaaatagggt cacgattcat atccaaatta | 7980 |
| tgctttgcaa ttggaaaagg gtttaaaatt ttatttatat ttctggtagt acctgtacta | 8040 |
| actgaattga aggtagtgtc tatgttattt ttgttctttt tttctgactt cggtttatgt | 8100 |
| tttcatttct ttggagtaat gctgctctag attgttctaa atagaatgtg ggcttcataa | 8160 |
| tttttttttc cacaaaaaca gagtagtcaa cttatatagt caattacatc aggacatttt | 8220 |
| gtgtttctta cagaagcaaa ccataggctc ctcttttcct taaaactact tagataaact | 8280 |
| gtattcgtga actgcatgct ggaaaatgct actattatgc taaataatgc taaccaacat | 8340 |
| ttaaaatgtg caaaactaat aaagattaca ttttttattt t | 8381 |

Updated Seq Listing2.ST25.txt

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 <211> 8381
 <212> DNA
 <213> homo sapiens

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 ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctgctctttg ggtgatgctg 180
 ttcctcactg cagatggata attttccttt taatcaggaa tttcatatgc agaataaatg 240
 gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg 300
 acagcttcaa cttcttcacc agagaatctc ttgctggctat tgaaagacgc attgcagaag 360
 aaaaggcaaa gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420
 atagtgactt ggaagctgga aagaaccttc cttttattta tggagacatt cctccagaga 480
 tgggtgtcaga gcccctggag gacctggacc cctactatat caataagaaa actttttatag 540
 tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttta 600
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 tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg 720
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 tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt 1200
 ttgactggaa gtcatatatt caagattcaa gatattcata tttcctggag ggtttttttag 1260
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 tctacctaat aaatttgatc ctggctgtgg tggccatggc ctacgaggaa cagaatcagg 1560
 ccaccttggga agaagcagaa cagaaagagg ccgaatttca gcagatgatt gaacagctta 1620
 aaaagcaaca ggaggcagct cagcaggcag caacggcaac tgcctcagaa cattccagag 1680

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
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| agcccagtg | c | agcaggcagg | c | ctctcagaca | g | gctcatctga | a | gcctctaag | t | tgagttcca | 1740 | | | |
| agagtgc | t | aa | g | gaaagaaga | a | aatcggagga | a | g | aaaaagaaa | a | acagaaagag | c | agtctggtg | 1800 |
| gggaagagaa | a | gatgaggat | g | aatccaaa | a | aatctgaatc | t | gaggacagc | a | tcaggagga | 1860 | | | |
| aaggttttcg | c | ttctccatt | g | aaggggaacc | g | attgacata | t | gaaaagagg | t | actcctccc | 1920 | | | |
| cacaccagtc | t | ttgttgagc | a | tccgtggct | c | ctatttttc | a | ccaaggcga | a | atagcagaa | 1980 | | | |
| caagcctttt | c | agcttttaga | g | ggcgagcaa | a | aggatgtggg | a | tctgagaac | g | acttcgcag | 2040 | | | |
| atgatgagca | c | agcaccttt | g | aggataacg | a | agagccgtag | a | gattccttg | t | ttgtgcccc | 2100 | | | |
| gacgacacgg | a | gagagacgc | a | acagcaacc | t | gagtcagac | c | agtaggtca | t | ccccgatgc | 2160 | | | |
| tggcagtg | t | tccagcgaat | g | ggaagatgc | a | acagcactgt | g | gattgcaat | g | gtgtggttt | 2220 | | | |
| ccttggttgg | t | ggaccttca | g | ttcctacat | c | gcctgttgg | a | acagcttctg | c | cagaggtga | 2280 | | | |
| taatagataa | g | ccagctact | g | atgacaatg | g | aacaaccac | t | gaaactgaa | a | tgagaaaga | 2340 | | | |
| gaagg | t | caag | t | ttctttccac | g | tttccatgg | a | cttttctaga | a | gatccttcc | caaaggcaac | 2400 | | |
| gagcaatgag | t | atagccagc | a | ttctaacia | a | atacagtaga | a | gaacttgaa | g | aatccaggc | 2460 | | | |
| agaaatgccc | a | ccctgttgg | t | ataaaat | t | ccaacatatt | c | ttaatctgg | g | actgttctc | 2520 | | | |
| catattgg | t | aaaagtga | aa | catgttgtca | a | acctggttgt | g | atggacca | t | ttgttgacc | 2580 | | | |
| tggccatcac | c | atctgtatt | g | tcttaaata | c | ctttttcat | g | gccatggag | c | actatccaa | 2640 | | | |
| tgacggacca | t | ttcaataat | g | tgcttacag | t | aggaaactt | g | gttttact | g | ggatcttta | 2700 | | | |
| cagcagaaat | g | tttctgaaa | a | ttattgcc | t | ggatcctta | c | tattatttc | c | agaaggct | 2760 | | | |
| ggaatatctt | t | gacggtttt | a | ttgtgacgc | t | tagcctgg | t | gaacttgga | c | tcgccaatg | 2820 | | | |
| tggaaggatt | a | tctgttctc | c | gttcatttc | g | attgctgcg | a | gttttcaag | t | tgcaaaat | 2880 | | | |
| cttgccaac | g | ttaaatatg | c | taataaaga | t | catcgcaa | t | tccgtggg | g | ctctgggaa | 2940 | | | |
| atttaaccct | c | gtcttg | gcc | a | tcacgcgtct | t | catttttgc | c | gtggtcggc | a | tcagctct | 3000 | | |
| ttggtaaaag | c | tacaaagat | t | gtgtctgca | a | gatcgccag | t | gattgtcaa | c | ccccacgct | 3060 | | | |
| ggcacatgaa | t | gacttcttc | c | actccttcc | t | gattgtgtt | c | gcgtgctg | t | gtggggagt | 3120 | | | |
| ggatagagac | c | atgtgggac | t | gtatggagg | t | gtgtgtca | a | gcatgtgc | c | tactgtct | 3180 | | | |
| tcatgatgg | t | catggtgatt | g | gaaacctag | t | gtcctgaa | t | ctcttctg | g | ccttgcttc | 3240 | | | |
| tgagctcatt | t | agtgcagac | a | accttg | cag | c | actgatga | t | gataatgaa | a | tgaataatc | 3300 | | |
| tccaaattgc | t | gtggatagg | a | tcacaaaag | g | agtagctta | t | gtgaaaaga | a | aaatatatg | 3360 | | | |
| aatttattca | a | cagtccttc | a | ttaggaaac | a | aaaagatttt | a | gatgaaatt | a | aaccacttg | 3420 | | | |
| atgatctaaa | c | acaagaaa | g | acagttgta | t | gtccaatca | a | tacaacagaa | a | ttgggaaag | 3480 | | | |
| atcttgacta | t | cttaaagat | g | taaatggaa | c | tacaagtgg | t | ataggaact | g | gcagcagt | 3540 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|------------|-------------|------------|-------------|------|
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| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgt | gtggaacctg | 3780 |
| aagaaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttgagacca | 4200 |
| tcaaactctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttgaggg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatggctct | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atgggtggaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
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| tcatctctct | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccaagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |
| gagcaaaggg | gatccgcacg | ctgctctttg | ctttgatgat | gtcccttcct | gcgttgttta | 5280 |
| acatcggcct | cctactcttc | ctagtcatgt | tcatctacgc | catctttggg | atgtccaact | 5340 |
| ttgcctatgt | taagaggggaa | gttgggatcg | atgacatgtt | caactttgag | acctttggca | 5400 |
| acagcatgat | ctgcctattc | caaattacaa | cctctgctgg | ctgggatgga | ttgctagcac | 5460 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
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| ccatttctcaa | cagtaagcca | cccgactgtg | accctaataa | agttaaccct | ggaagctcag | 5520 |
| ttaagggaga | ctgtgggaac | ccatctgttg | gaattttctt | ttttgtcagt | tacatcatca | 5580 |
| tatccttcct | ggttgtggtg | aacatgtaca | tcgcgggtcat | cctggagaac | ttcagtgttg | 5640 |
| ctactgaaga | aagtgcagag | cctctgagtg | aggatgactt | tgagatgttc | tatgaggttt | 5700 |
| gggagaagtt | tgatccccgat | gcaactcagt | tcatggaatt | tgaaaaatta | tctcagtttg | 5760 |
| cagctgcgct | tgaaccgcct | ctcaatctgc | cacaaccaa | caaactccag | ctcattgcca | 5820 |
| tggatttgcc | catggtgagt | ggtgaccgga | tccactgtct | tgatatctta | tttgctttta | 5880 |
| caaagcgggt | tctaggagag | agtggagaga | tggatgctct | acgaatacag | atggaagagc | 5940 |
| gattcatggc | ttccaatcct | tccaaggctt | cctatcagcc | aatcactact | actttaaaac | 6000 |
| gaaaacaaga | ggaagtatct | gctgtcatta | ttcagcgtgc | ttacagacgc | caccttttaa | 6060 |
| agcgaactgt | aaaacaagct | tcctttacgt | acaataaaaa | caaatcaaa | ggtggggcta | 6120 |
| atcttcttat | aaaagaagac | atgataattg | acagaataaa | tgaaaactct | attacagaaa | 6180 |
| aaactgatct | gaccatgtcc | actgcagctt | gtccaccttc | ctatgaccgg | gtgacaaagc | 6240 |
| caattgtgga | aaaacatgag | caagaaggca | aagatgaaaa | agccaaaggg | aaataaatga | 6300 |
| aaataaataa | aaataattgg | gtgacaaatt | gtttacagcc | tgtgaagggtg | atgtattttt | 6360 |
| atcaacagga | ctccttttagg | aggatcaatgc | caaactgact | gtttttacac | aatctcctt | 6420 |
| aaggctcagt | cctacaataa | gacagtgacc | ccttgtcagc | aaactgtgac | tctgtgtaaa | 6480 |
| ggggagatga | ccttgacagg | aggttactgt | tctcactacc | agctgacact | gctgaagata | 6540 |
| agatgcacaa | tggctagtca | gactgtaggg | accagtttca | aggggtgcaa | acctgtgatt | 6600 |
| ttggggttgt | ttaacatgaa | acactttagt | gtagtaattg | tatccactgt | ttgcatttca | 6660 |
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| gacctctata | acaggatgac | cacctggggg | gtatggcaac | cacatggccc | tcccagctac | 6840 |
| acaaagtcgt | ggtttgcatg | agggcatgct | gcacttagag | atcatgcatg | agaaaaagtc | 6900 |
| acaagaaaaa | caaattctta | aatttcacca | tatttctggg | aggggtaatt | gggtgataag | 6960 |
| tggagggtgct | ttgttgatct | tgttttgcga | aatccagccc | ctagaccaag | tagattattt | 7020 |
| gtgggtaggc | cagtaaatct | tagcaggtgc | aaacttcatt | caaatgtttg | gagtcataaa | 7080 |
| tgttatgttt | ctttttgttg | tattaaaaaa | aaaacctgaa | tagtgaatat | tgcccctcac | 7140 |
| cctccaccgc | cagaagactg | aattgaccaa | aattactctt | tataaatttc | tgctttttcc | 7200 |
| tgcactttgt | ttagccatct | ttgggctctc | agcaagggtg | acactgtata | tgtaaatgaa | 7260 |
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Updated Seq Listing2.ST25.txt

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| ctttacacag | gtaataaaat | gtattctgta | ccatttatag | atagtttgga | tgctatcaat | 7440 |
| gcatgtttat | attaccatgc | tgctgtatct | ggtttctctc | actgctcaga | atctcattta | 7500 |
| tgagaaacca | tatgtcagtg | gtaaagtcaa | ggaaattggt | caacagatct | cattttattta | 7560 |
| agtcattaag | caatagtttg | cagcacttta | acagcttttt | ggttattttt | acattttaag | 7620 |
| tggataacat | atgggtatata | gccagactgt | acagacatgt | ttaaaaaac | acactgctta | 7680 |
| acctattaaa | tatgtgttta | gaattttata | agcaaataata | aatactgtaa | aaagtcactt | 7740 |
| tattttattt | ttcagcatta | tgtacataaa | tatgaagagg | aaattatctt | caggttgata | 7800 |
| tcacaatcac | ttttcttact | ttctgtccat | agtacttttt | catgaaagaa | atttgctaaa | 7860 |
| taagacatga | aaacaagact | gggtagttgt | agatttctgc | tttttaaatt | acatttgcta | 7920 |
| atttttagatt | atttcacaat | tttaaggagc | aaaatagggt | cacgattcat | atccaaatta | 7980 |
| tgctttgcaa | ttggaaaagg | gtttaaaatt | ttatttatat | ttctggtagt | acctgtacta | 8040 |
| actgaattga | aggtagtgt | tatgttattt | ttgttctttt | tttctgactt | cggtttatgt | 8100 |
| tttcatttct | ttggagtaat | gctgctctag | attgttctaa | atagaatgtg | ggcttcataa | 8160 |
| tttttttttc | cacaaaaaca | gagtagtcaa | cttatatagt | caattacatc | aggacatttt | 8220 |
| gtgtttctta | cagaagcaaa | ccataggctc | ctcttttcct | taaaactact | tagataaact | 8280 |
| gtattcgtga | actgcatgct | ggaaaatgct | actattatgc | taaataatgc | taaccaacat | 8340 |
| ttaaaatgtg | caaaaactaat | aaagattaca | ttttttattt | t | | 8381 |

<210> 52
 <211> 8380
 <212> DNA
 <213> homo sapiens

| | |
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| gtgtgtttctg | ccccagtgag actgcagccc ttgtaaatac ttgacacct ttgcaagaa 120 |
| ggaatctgaa | caattgcaac tgaaggcaca ttgttatcat ctctgtctttg ggtgatgctg 180 |
| ttcctcactg | cagatggata attttccttt taatcaggaa ttcatatgc agaataaatg 240 |
| gtaattaaaa | tgtgcaggat gacaagatgg agcaaacagt gcttgtagca ccaggacctg 300 |
| acagcttcaa | cttcttcacc agagaatctc ttgcggctat tgaaagacgc attgcagaag 360 |
| aaaaggcaaa | gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa 420 |
| atagtgactt | ggaagctgga aagaaccttc catttattta tggagacatt cctccagaga 480 |
| tggtgtcaga | gcccctggag gacctggacc cctactatat caataagaaa acttttatag 540 |
| tattgaataa | attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa 600 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|------------|------------|-------------|------|
| ctcccttcaa | tcctcttagg | aaaatagcta | ttaagatttt | ggtacattca | ttattcagca | 660 |
| tgctaattat | gtgcactatt | ttgacaaaact | gtgtgtttat | gacaatgagt | aaccctcctg | 720 |
| attggacaaa | gaatgtagaa | tacaccttca | caggaatata | tacttttgaa | tcacttataa | 780 |
| aaattattgc | aaggggattc | tgtttagaag | attttacttt | ccttcgggat | ccatggaact | 840 |
| ggctcgattt | cactgtcatt | acatttgcgt | acgtcacaga | gtttgtggac | ctgggcaatg | 900 |
| tctcggcatt | gagaacattc | agagttctcc | gagcattgaa | gacgatttca | gtcattccag | 960 |
| gcctgaaaac | cattgtggga | gccctgatcc | agtctgtgaa | gaagctctca | gatgtaatga | 1020 |
| tcctgactgt | gttctgtctg | agcgtatttg | ctctaattgg | gctgcagctg | ttcatgggca | 1080 |
| acctgaggaa | taaatgtata | caatggcctc | ccaccaatgc | ttccttgag | gaacatagta | 1140 |
| tagaaaagaa | tataactgtg | aattataatg | gtacacttat | aatgaaact | gtctttgagt | 1200 |
| ttgactggaa | gtcatatatt | caagattcaa | gatatcatta | ttccttgag | ggttttttag | 1260 |
| atgcactact | atgtggaaat | agctctgatg | caggccaatg | tccagaggga | tatatgtgtg | 1320 |
| tgaaagctgg | tagaaatccc | aattatggct | acacaagctt | tgataccttc | agttgggctt | 1380 |
| ttttgtcctt | gtttcgacta | atgactcagg | acttctggga | aaatctttat | caactgacat | 1440 |
| tacgtgctgc | tgggaaaacg | tacatgatat | ttttgtatt | ggtcattttc | ttgggctcat | 1500 |
| tctaccta | aaatttgatc | ctggctgtgg | tggccatggc | ctacagggaa | cagaatcagg | 1560 |
| ccaccttgg | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtg | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttc | agcttttagag | ggcgagcaaa | ggatgtggga | tctgagaacg | acttcgcaga | 2040 |
| tgatgagcac | agcacctttg | aggataacga | gagccgtaga | gattccttgt | ttgtgccccg | 2100 |
| acgacacgga | gagagacgca | acagcaacct | gagtcagacc | agtaggtcat | cccggatgct | 2160 |
| ggcagtgttt | ccagcgaatg | ggaagatgca | cagcactgtg | gattgcaatg | gtgtgggtttc | 2220 |
| cttggttggt | ggaccttcag | ttcctacatc | gcctgttgga | cagcttctgc | cagagggtgat | 2280 |
| aatagataag | ccagctactg | atgacaatgg | aacaaccact | gaaactgaaa | tgagaaagag | 2340 |
| aagggtcaagt | tctttccacg | tttccatgga | ctttctagaa | gatccttccc | aaaggcaacg | 2400 |
| agcaatgagt | atagccagca | ttctaacaaa | tacagtagaa | gaacttgaag | aatccaggca | 2460 |
| gaaatgcca | ccctgttggt | ataaattttc | caacatattc | ttaatctggg | actgttctcc | 2520 |

Updated Seq Listing2.ST25.txt

| | |
|---|------|
| atattgggta aaagtgaaac atgttgtaa cctgggtgtg atggacccat ttgttgacct | 2580 |
| ggccatcacc atctgtattg tcttaaatac tcttttcatg gccatggagc actatccaat | 2640 |
| gacggacccat ttcaataatg tgcttacagt aggaaacttg gttttcactg ggatctttac | 2700 |
| agcagaaatg tttctgaaaa ttattgccat ggatccttac tattatttcc aagaaggctg | 2760 |
| gaatatcttt gacgggtttta ttgtgacgct tagcctggta gaacttggac tcgccaatgt | 2820 |
| ggaaggatta tctgttctcc gttcatttcg attgctgcga gttttcaagt tggcaaaatc | 2880 |
| ttggccaacg ttaaataatgc taataaagat catcggcaat tccgtggggg ctctgggaaa | 2940 |
| tttaaccctc gtcttggcca tcatcgtctt cttttttgcc gtggtcggca tgcagctctt | 3000 |
| tggtaaaagc taaaaagatt gtgtctgcaa gatcgccagt gattgtcaac tcccacgctg | 3060 |
| gcacatgaat gacttcttcc actccttcct gattgtgttc cgcgtgctgt gtggggagtg | 3120 |
| gatagagacc atgtgggact gtatggagggt tgctgggtcaa gccatgtgcc ttactgtctt | 3180 |
| catgatggtc atgggtgattg gaaacctagt ggtcctgaat ctctttcttg ccttgcttct | 3240 |
| gagctcattt agtgcagaca accttgcagc cactgatgat gataatgaaa tgaataatct | 3300 |
| ccaaattgct gtggatagga tgcacaaaagg agtagcttat gtgaaaagaa aaatatatga | 3360 |
| atttattcaa cagtccttca ttaggaaaca aaagatttta gatgaaatta aaccacttga | 3420 |
| tgatctaaac aacaagaaaag acagttgtat gtccaatcat acaacagaaa ttgggaaaga | 3480 |
| tcttgactat cttaaagatg taaatggaac tacaagtgggt ataggaactg gcagcagtgt | 3540 |
| tgaaaaatac attattgatg aaagtgatta catgtcattc ataaacaacc ccagtcttac | 3600 |
| tgtgactgta ccaattgctg taggagaatc tgactttgaa aatttaaaca cggaagactt | 3660 |
| tagtagtgaa tcggatctgg aagaaagcaa agagaaactg aatgaaagca gtagctcatc | 3720 |
| agaaggtagc actgtggaca tcggcgcacc tgtagaagaa cagcccgtag tggaacctga | 3780 |
| agaaactctt gaaccagaag cttgtttcac tgaaggctgt gtacaaagat tcaagtgttg | 3840 |
| tcaaatacat gtggaagaag gcagaggaaa acaatgggtg aacctgagaa ggacgtgttt | 3900 |
| ccgaatagtt gaacataact ggtttgagac cttcattgtt ttcattgattc tccttagtag | 3960 |
| tggtgctctg gcatttgaag atatatatat tgatcagcga aagacgatta agacgatgtt | 4020 |
| ggaatatgct gacaagggtt tcacttacat tttcattctg gaaatgcttc taaaatgggt | 4080 |
| ggcatatggc tatcaaacat atttcaccaa tgcctgggtg tggctggact tcttaattgt | 4140 |
| tgatgtttca ttggtcagtt taacagcaaa tgccttgggt tactcagaac ttggagccat | 4200 |
| caaatctctc aggacactaa gagctctgag acctctaaga gccttatctc gatttgaagg | 4260 |
| gatgaggggtg gttgtgaatg cccttttagg agcaattcca tccatcatga atgtgcttct | 4320 |
| ggtttgcctt atattctggc taattttcag catcatgggc gtaaatttgt ttgctggcaa | 4380 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|------------|-------------|------------|------------|------------|-------------|------|
| attctaccac | tgtattaaca | ccacaactgg | tgacaggttt | gacatcgaag | acgtgaataa | 4440 |
| tcatactgat | tgccataaac | taatagaaag | aaatgagact | gctcgaatga | aaaatgtgaa | 4500 |
| agtaaacttt | gataatgtag | gatttgggta | tctctctttg | cttcaagttg | ccacattcaa | 4560 |
| aggatggatg | gatataatgt | atgcagcagt | tgattccaga | aatgtggaac | tccagcctaa | 4620 |
| gtatgaaaaa | agtctgtaca | tgtatcttta | ctttgttatt | ttcatcatct | ttgggtcctt | 4680 |
| cttcaccttg | aacctgttta | ttgggtgcat | catagataat | ttcaaccagc | agaaaaagaa | 4740 |
| gtttggaggt | caagacatct | ttatgacaga | agaacagaag | aaatactata | atgcaatgaa | 4800 |
| aaaattagga | tcgaaaaaac | cgcaaaagcc | tatacctcga | ccaggaaaca | aatttcaagg | 4860 |
| aatggtcttt | gacttcgtaa | ccagacaagt | ttttgacata | agcatcatga | ttctcatctg | 4920 |
| tcttaacatg | gtcacaatga | tggtggaaac | agatgaccag | agtgaatatg | tgactaccat | 4980 |
| tttgtcacgc | atcaatctgg | tgttcattgt | gctatttact | ggagagtgtg | tactgaaact | 5040 |
| catctctcta | cgccattatt | attttaccat | tggatggaat | atttttgatt | ttgtggttgt | 5100 |
| cattctctcc | attgtaggta | tgtttcttgc | cgagctgata | gaaaagtatt | tcgtgtcccc | 5160 |
| taccctgttc | cgagtgatcc | gtcttgctag | gattggccga | atcctacgtc | tgatcaaagg | 5220 |
| agcaaagggg | atccgcacgc | tgctctttgc | tttgatgatg | tcccttcctg | cgttgtttaa | 5280 |
| catcggcctc | ctactcttcc | tagtcatgtt | catctacgcc | atctttggga | tgtccaactt | 5340 |
| tgccatatgt | aagaggggaag | ttgggatcga | tgacatgttc | aactttgaga | cctttggcaa | 5400 |
| cagcatgatc | tgccatttcc | aaattacaac | ctctgctggc | tgggatggat | tgctagcacc | 5460 |
| cattctcaac | agtaagccac | ccgactgtga | ccctaataaa | gttaaccctg | gaagctcagt | 5520 |
| taagggagac | tgtgggaacc | catctgttgg | aattttcttt | tttgtcagtt | acatcatcat | 5580 |
| atccttcctg | gttgtggtga | acatgtacat | cgcggtcatc | ctggagaact | tcagtgttgc | 5640 |
| tactgaagaa | agtgcagagc | ctctgagtga | ggatgacttt | gagatgttct | atgaggtttg | 5700 |
| ggagaagttt | gatcccgatg | caactcagtt | catggaattt | gaaaaattat | ctcagtttgc | 5760 |
| agctgcgctt | gaaccgcctc | tcaatctgcc | acaaccaaac | aaactccagc | tcattgccat | 5820 |
| ggatttgccc | atggtgagtg | gtgaccggat | ccactgtctt | gatatcttat | ttgctttttac | 5880 |
| aaagcgggtt | ctaggagaga | gtggagagat | ggatgctcta | cgaatacaga | tggaagagcg | 5940 |
| attcatggct | tccaatcctt | ccaaggctct | ctatcagcca | atcactacta | ctttaaaacg | 6000 |
| aaaacaagag | gaagtatctg | ctgtcattat | tcagcgtgct | tacagacgcc | accttttaaa | 6060 |
| gcgaactgta | aaacaagctt | cctttacgta | caataaaaac | aaaatcaaag | gtggggctaa | 6120 |
| tcttcttata | aaagaagaca | tgataattga | cagaataaat | gaaaactcta | ttacagaaaa | 6180 |
| aactgatctg | accatgtcca | ctgcagcttg | tccaccttcc | tatgaccggg | tgacaaagcc | 6240 |
| aattgtggaa | aaacatgagc | aagaaggcaa | agatgaaaaa | gccaaaggga | aataaatgaa | 6300 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
| aataaataaa aataattggg tgacaaattg ttacagcct gtgaaggtga tgtattttta | 6360 |
| tcaacaggac tccttttagga ggtcaatgcc aaactgactg tttttacaca aatctcctta | 6420 |
| aggtcagtgc ctacaataag acagtgaccc cttgtcagca aactgtgact ctgtgtaaag | 6480 |
| gggagatgac cttgacagga ggttactgtt ctcactacca gctgacactg ctgaagataa | 6540 |
| gatgcacaat ggctagtcag actgtagggg ccagtttcaa ggggtgcaaa cctgtgattt | 6600 |
| tgggggttgt taacatgaaa cacttttagt tagtaattgt atccactgtt tgcatttcaa | 6660 |
| ctgccacatt tgtcacattt ttatggaatc tgtagtgga ttcattttt tgttaatcca | 6720 |
| tgtgtttatt atatgtgact atttttgtaa acgaagtttc tgttgagaaa taggctaagg | 6780 |
| acctctataa caggatgcc acctgggggg tatggcaacc acatggccct cccagctaca | 6840 |
| caaagtcgtg gtttgcatga gggcatgctg cacttagaga tcatgcatga gaaaaagtca | 6900 |
| caagaaaaac aaattcttaa atttcaccat atttctggga ggggtaattg ggtgataagt | 6960 |
| ggaggtgctt tgttgatctt gttttgcaa atccagcccc tagaccaagt agattatttg | 7020 |
| tgggtaggcc agtaaactct agcaggtgca aacttcattc aaatgtttgg agtcataaat | 7080 |
| gttatgtttc tttttgttgt attaaaaaaaa aaacctgaat agtgaatatt gcccctcacc | 7140 |
| ctccaccgcc agaagactga attgaccaa attactctt ataaatttct gctttttcct | 7200 |
| gcactttgtt tagccatctt tgggctctca gcaaggttga cactgtatat gttaatgaaa | 7260 |
| tgctatttat tatgtaaata gtcattttac cctgtggtgc acgtttgagc aaacaaataa | 7320 |
| tgacctaac acagtattta ttgcatcaaa tatgtaccac aagaaatgta gagtgcaagc | 7380 |
| tttacacagg taataaaatg tattctgtac ctttataga tagtttgat gctatcaatg | 7440 |
| catgtttata ttaccatgct gctgtatctg gtttctctca ctgctcagaa tctcatttat | 7500 |
| gagaaacat atgtcagtgg taaagtcaag gaaattgttc aacagatctc atttatttaa | 7560 |
| gtcattaagc aatagtttgc agcactttaa cagctttttg gttattttta cttttaagt | 7620 |
| ggataacata tggatatatag ccagactgta cagacatgtt taaaaaaca cactgcttaa | 7680 |
| cctattaaat atgtgttttag aattttataa gcaaatataa atactgtaaa aagtcacttt | 7740 |
| attttatttt tcagcattat gtacataaat atgaagagga aattatcttc aggttgatat | 7800 |
| cacaatcact tttcttactt tctgtccata gtactttttc atgaaagaaa tttgctaaat | 7860 |
| aagacatgaa aacaagactg ggtagttgta gatttctgct ttttaaatta ctttgctaa | 7920 |
| ttttagatta tttcacaatt ttaaggagca aaatagggtc acgattcata tccaaattat | 7980 |
| gctttgcaat tggaaaaggg tttaaaattt ttttatatt tctggtagta cctgtactaa | 8040 |
| ctgaattgaa ggtagtgctt atgttatttt tgttcttttt ttctgacttc ggtttatgtt | 8100 |
| ttcatttctt tggagtaatg ctgctctaga ttgttctaaa tagaatgtgg gcttcataat | 8160 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
| ttttttttcc acaaaaacag agtagtcaac ttatatagtc aattacatca ggacattttg | 8220 |
| tgttttcttac agaagcaaac cataggctcc tcttttcctt aaaactactt agataaactg | 8280 |
| tattcgtgaa ctgcatgctg gaaaatgcta ctattatgct aaataatgct aaccaacatt | 8340 |
| taaaatgtgc aaaactaata aagattacat tttttatttt | 8380 |

<210> 53
 <211> 8379
 <212> DNA
 <213> homo sapiens

| | |
|--|------|
| <400> 53 | |
| atactgcaga ggtctctggt gcatgtgtgt atgtgtgctt ttgtgtgtgt ttgtgtgtct | 60 |
| gtgtgtttctg ccccgagtga actgcagccc ttgtaaatac ttgacacct ttgcaagaa | 120 |
| ggaatctgaa caattgcaac tgaaggcaca ttgttatcat ctcgtctttg ggtgatgctg | 180 |
| ttcctcactg cagatggata attttccttt taatcaggaa tttcatatgc agaataaatg | 240 |
| gtaattaaaa tgtgcaggat gacaagatgg agcaaacagt gcttgtacca ccaggacctg | 300 |
| acagcttcaa cttcttcacc agagaatctc ttgcggtat tgaaagacgc attgcagaag | 360 |
| aaaaggcaaa gaatcccaaa ccagacaaaa aagatgacga cgaaaatggc ccaaagccaa | 420 |
| atagtgactt ggaagctgga aagaaccttc catttattta tggagacatt cctccagaga | 480 |
| tggtgtcaga gcccctggag gacctggacc cctactatat caataagaaa actttttatag | 540 |
| tattgaataa attgaaggcc atcttccggt tcagtgccac ctctgccctg tacattttaa | 600 |
| ctcccttcaa tcctcttagg aaaatagcta ttaagatttt ggtacattca ttattcagca | 660 |
| tgctaattat gtgcactatt ttgacaaact gtgtgtttat gacaatgagt aaccctcctg | 720 |
| attggacaaa gaatgtagaa tacaccttca caggaatata tacttttgaa tcacttataa | 780 |
| aaattattgc aaggggattc tgtttagaag attttacttt ccttcgggat ccatggaact | 840 |
| ggctcgattt cactgtcatt acatttgcgt acgtcacaga gtttgtggac ctgggcaatg | 900 |
| tctcggcatt gagaacattc agagtctctc gagcattgaa gacgatttca gtcattccag | 960 |
| gcctgaaaac cattgtggga gccctgatcc agtctgtgaa gaagctctca gatgtaatga | 1020 |
| tcctgactgt gttctgtctg agcgtatttg ctctaattgg gctgcagctg ttcattgggca | 1080 |
| acctgaggaa taaatgtata caatggcctc ccaccaatgc ttccttggag gaacatagta | 1140 |
| tagaaaagaa tataactgtg aattataatg gtacacttat aaatgaaact gtctttgagt | 1200 |
| ttgactggaa gtcatatatt caagattcaa gatatcatta tttcctggag ggtttttttag | 1260 |
| atgcactact atgtggaaat agctctgatg caggccaatg tccagaggga tatatgtgtg | 1320 |
| tgaaagctgg tagaaatccc aattatggct acacaagctt tgataccttc agttgggctt | 1380 |
| ttttgtcctt gtttcgacta atgactcagg acttctggga aaatctttat caactgacat | 1440 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|------------|------|
| tacgtgctgc | tgggaaaacg | tacatgatata | ttttgtatt | ggcatttttc | ttgggctcat | 1500 |
| tctacctaat | aaatttgatc | ctggctgtgg | tggccatggc | ctacgaggaa | cagaatcagg | 1560 |
| ccaccttgga | agaagcagaa | cagaaagagg | ccgaatttca | gcagatgatt | gaacagctta | 1620 |
| aaaagcaaca | ggaggcagct | cagcaggcag | caacggcaac | tgcttcagaa | cattccagag | 1680 |
| agcccagtgc | agcaggcagg | ctctcagaca | gctcatctga | agcctctaag | ttgagttcca | 1740 |
| agagtgctaa | ggaaagaaga | aatcggagga | agaaaagaaa | acagaaagag | cagtctggtg | 1800 |
| gggaagagaa | agatgaggat | gaattccaaa | aatctgaatc | tgaggacagc | atcaggagga | 1860 |
| aaggttttcg | cttctccatt | gaagggaacc | gattgacata | tgaaaagagg | tactcctccc | 1920 |
| cacaccagtc | tttgttgagc | atccgtggct | ccctattttc | accaaggcga | aatagcagaa | 1980 |
| caagcctttt | cagcttttaga | gggcgagcaa | aggatgtggg | atctgagaac | gacttcgcag | 2040 |
| atgatgagca | cagcaccttt | gaggataacg | agagccgtag | agattccttg | tttgtgcccc | 2100 |
| gacgacacgg | agagagacgc | aacagcaacc | tgagtcagac | cagtaggtca | tcccggatgc | 2160 |
| tggcagtgtt | tccagcgaat | gggaagatgc | acagcactgt | ggattgcaat | ggtgtggttt | 2220 |
| ccttggttgg | tggaccttca | gttcctacat | cgctgttgg | acagcttctg | ccagaggtga | 2280 |
| taatagataa | gccagctact | gatgacaatg | gaacaaccac | tgaaactgaa | atgagaaaga | 2340 |
| gaagggtcaag | ttctttccac | gtttccatgg | actttctaga | agatccttcc | caaaggcaac | 2400 |
| gagcaatgag | tatagccagc | attctaacaa | atacagtaga | agaacttgaa | gaatccaggc | 2460 |
| agaaatgccc | accctgttgg | tataaatttt | ccaacatatt | cttaatctgg | gactgttctc | 2520 |
| catattgggt | aaaagtgaag | catgttgtca | acctgggtgt | gatggacca | tttgttgacc | 2580 |
| tggccatcac | catctgtatt | gtcttaaata | ctcttttcat | ggccatggag | cactatccaa | 2640 |
| tgacggacca | tttcaataat | gtgcttacag | taggaaactt | ggttttcact | gggatcttta | 2700 |
| cagcagaaat | gtttctgaaa | attattgcca | tggatcctta | ctattatttc | caagaaggct | 2760 |
| ggaatatctt | tgacgggttt | attgtgacgc | ttagcctggg | agaacttgga | ctcgccaatg | 2820 |
| tgggaaggatt | atctgttctc | cgttcatttc | gattgctgcg | agttttcaag | ttggcaaaat | 2880 |
| cttggccaac | gttaaataatg | ctaataaaga | tcatcggcaa | ttccgtgggg | gctctgggaa | 2940 |
| atttaaccct | cgtcttggcc | atcatcgtct | tcatttttgc | cgtggtcggc | atgcagctct | 3000 |
| ttggtaaaaag | ctacaaagat | tgtgtctgca | agatcgccag | tgattgtcaa | ctcccacgct | 3060 |
| ggcacatgaa | tgacttcttc | cactccttcc | tgattgtgtt | ccgcgtgctg | tgtggggagt | 3120 |
| ggatagagac | catgtgggac | tgtatggagg | ttgctgggtca | agccatgtgc | cttactgtct | 3180 |
| tcatgatggg | catggtgatt | ggaaacctag | tggtcctgaa | tctctttctg | gccttgcttc | 3240 |
| tgagctcatt | tagtgcagac | aaccttgtag | ccactgatga | tgataatgaa | atgaataatc | 3300 |
| tccaaattgc | tgtggatagg | atgcacaaag | gagtagctta | tgtgaaaaga | aaaatatatg | 3360 |

Updated Seq Listing2.ST25.txt

| | | | | | | |
|-------------|------------|------------|------------|------------|------------|------|
| aattttattca | acagtccttc | attaggaaac | aaaagatttt | agatgaaatt | aaaccacttg | 3420 |
| atgatctaaa | caacaagaaa | gacagttgta | tgtccaatca | tacaacagaa | attgggaaag | 3480 |
| atcttgacta | tcttaaagat | gtaaattgaa | ctacaagtgg | tataggaact | ggcagcagtg | 3540 |
| ttgaaaaata | cattattgat | gaaagtgatt | acatgtcatt | cataaacaac | cccagtctta | 3600 |
| ctgtgactgt | accaattgct | gtaggagaat | ctgactttga | aaattttaa | acggaagact | 3660 |
| ttagtagtga | atcggatctg | gaagaaagca | aagagaaact | gaatgaaagc | agtagctcat | 3720 |
| cagaaggtag | cactgtggac | atcggcgcac | ctgtagaaga | acagcccgtg | gtggaacctg | 3780 |
| aagaaactct | tgaaccagaa | gcttgtttca | ctgaaggctg | tgtacaaaga | ttcaagtgtt | 3840 |
| gtcaaatcaa | tgtggaagaa | ggcagaggaa | aacaatggtg | gaacctgaga | aggacgtgtt | 3900 |
| tccgaatagt | tgaacataac | tggtttgaga | ccttcattgt | tttcatgatt | ctccttagta | 3960 |
| gtggtgctct | ggcatttgaa | gatatatata | ttgatcagcg | aaagacgatt | aagacgatgt | 4020 |
| tggaatatgc | tgacaagggt | ttcacttaca | ttttcattct | ggaaatgctt | ctaaaatggg | 4080 |
| tggcatatgg | ctatcaaaca | tatttcacca | atgcctggtg | ttggctggac | ttcttaattg | 4140 |
| ttgatgtttc | attggtcagt | ttaacagcaa | atgccttggg | ttactcagaa | cttggagcca | 4200 |
| tcaaactctct | caggacacta | agagctctga | gacctctaag | agccttatct | cgatttgaag | 4260 |
| ggatgagggg | ggttgtgaat | gcccttttag | gagcaattcc | atccatcatg | aatgtgcttc | 4320 |
| tggtttgtct | tatattctgg | ctaattttca | gcatcatggg | cgtaaatttg | tttgctggca | 4380 |
| aattctacca | ctgtattaac | accacaactg | gtgacagggt | tgacatcgaa | gacgtgaata | 4440 |
| atcatactga | ttgcctaaaa | ctaatagaaa | gaaatgagac | tgctcgatgg | aaaaatgtga | 4500 |
| aagtaaactt | tgataatgta | ggatttgggt | atctctcttt | gcttcaagtt | gccacattca | 4560 |
| aaggatggat | ggatataatg | tatgcagcag | ttgattccag | aaatgtggaa | ctccagccta | 4620 |
| agtatgaaaa | aagtctgtac | atgtatcttt | actttgttat | tttcatcatc | tttgggtcct | 4680 |
| tcttcacctt | gaacctgttt | attggtgtca | tcatagataa | tttcaaccag | cagaaaaaga | 4740 |
| agtttgaggg | tcaagacatc | tttatgacag | aagaacagaa | gaaatactat | aatgcaatga | 4800 |
| aaaaattagg | atcgaaaaaa | ccgcaaaagc | ctatacctcg | accaggaaac | aaatttcaag | 4860 |
| gaatgggtctt | tgacttcgta | accagacaag | tttttgacat | aagcatcatg | attctcatct | 4920 |
| gtcttaacat | ggtcacaatg | atggtggaaa | cagatgacca | gagtgaatat | gtgactacca | 4980 |
| ttttgtcacg | catcaatctg | gtgttcattg | tgctatttac | tggagagtgt | gtactgaaac | 5040 |
| tcattctctc | acgccattat | tattttacca | ttggatggaa | tatttttgat | tttgtggttg | 5100 |
| tcattctctc | cattgtaggt | atgtttcttg | ccgagctgat | agaaaagtat | ttcgtgtccc | 5160 |
| ctaccctggt | ccgagtgatc | cgtcttgcta | ggattggccg | aatcctacgt | ctgatcaaag | 5220 |

Updated Seq Listing2.ST25.txt

| | |
|--|------|
| gagcaaaggg gatccgcacg ctgctctttg ctttgatgat gtccttcct gcgttgttta | 5280 |
| acatcggcct cctactcttc ctagtcatgt tcatctacgc catctttggg atgtccaact | 5340 |
| ttgcctatgt taagaggga gttgggatcg atgacatgtt caactttgag acctttggca | 5400 |
| acagcatgat ctgcctattc caaattacaa cctctgctgg ctgggatgga ttgctagcac | 5460 |
| ccatttctca cagtaagcca cccgactgtg accctaataa agttaaccct ggaagctcag | 5520 |
| ttaagggaga ctgtgggaac ccatctgttg gaattttctt ttttgtcagt tacatcatca | 5580 |
| tatccttcct gggttggtg aacatgtaca tcgcggtcat cctggagaac ttcagtgttg | 5640 |
| ctactgaaga aagtgcagag cctctgagtg aggatgactt tgagatgttc tatgaggttt | 5700 |
| gggagaagtt tgatcccgat gcaactcagt tcatggaatt tgaaaaatta tctcagtttg | 5760 |
| cagctgcgct tgaaccgcct ctcaatctgc cacaaccaa caaactccag ctcattgcca | 5820 |
| tggatttgcc catggtgagt ggtgaccgga tccactgtct tgatatctta tttgctttta | 5880 |
| caaagcgggt tctaggagag agtggagaga tggatgtctt acgaatacag atggaagagc | 5940 |
| gattcatggc ttccaatcct tccaaggtct cctatcagcc aatcactact actttaaaac | 6000 |
| gaaaacgagg aagtatctgc tgtcattatt cagcgtgctt acagacgcca ctttttaaag | 6060 |
| cgaactgtaa aacaagcttc ctttacgtac aataaaaaca aaatcaaagg tggggctaata | 6120 |
| cttcttataa aagaagacat gataattgac agaataaatg aaaactctat tacagaaaaa | 6180 |
| actgatctga ccatgtccac tgcagcttgt ccaccttcct atgaccgggt gacaaagcca | 6240 |
| attgtggaaa aacatgagca agaaggcaaa gatgaaaaag ccaaaggga ataaatgaaa | 6300 |
| ataaataaaa ataattgggt gacaaattgt ttacagcctg tgaaggatgat gtatttttat | 6360 |
| caacaggact ctttaggag gtcaatgcca aactgactgt ttttacacaa atctccttaa | 6420 |
| ggtcagtgcc tacaataaga cagtgacccc ttgtcagcaa actgtgactc tgtgtaaagg | 6480 |
| ggagatgacc ttgacaggag gttactgttc tctactaccag ctgacactgc tgaagataag | 6540 |
| atgcacaatg gctagtcaga ctgtaggac cagtttcaag gggtgcaaac ctgtgatttt | 6600 |
| ggggttggtt aacatgaaac actttagtgt agtaattgta tccactgttt gcatttcaac | 6660 |
| tgccacattt gtcacatttt tatggaatct gttagtggat tcatcttttt gttaatccat | 6720 |
| gtgtttatta tatgtgacta tttttgtaa cgaagtttct gttgagaaat aggctaagga | 6780 |
| cctctataac aggtatgcca cctgggggggt atggcaacca catggccctc ccagctacac | 6840 |
| aaagtcgtgg tttgcatgag ggcatgctgc acttagagat catgcatgag aaaaagtcac | 6900 |
| aagaaaaaca aattcttaaa tttcaccata tttctgggag gggtaattgg gtgataagt | 6960 |
| gagggtgctt gttgatcttg ttttgcgaaa tccagcccct agaccaagta gattatttgt | 7020 |
| gggtaggcca gtaaattcta gcagggtgcaa acttcattca aatgtttgga gtcataaat | 7080 |
| ttatgtttct ttttgttgta ttaaaaaaaaa aacctgaata gtgaatattg cccctcacc | 7140 |

Updated Seq Listing2.ST25.txt

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tccaccgcca gaagactgaa ttgaccaaaa ttactcttta taaatttctg ctttttcctg 7200
cactttgttt agccatcttt gggctctcag caaggttgac actgtatatg ttaatgaaat 7260
gctattttatt atgtaaatag tcatttttacc ctgtggtgca cgtttgagca aacaaataat 7320
gacctaagca cagtatttat tgcacaaaat atgtaccaca agaaatgtag agtgcaagct 7380
ttacacaggt aataaaaatgt attctgtacc atttatagat agtttggtatg ctatcaatgc 7440
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agaaaccata tgtcagtggg aaagtcaagg aaattgttca acagatctca tttattttaag 7560
tcattaagca atagtttgca gcactttaac agcttttttg ttattttttac attttaagtg 7620
gataacatat ggtatatagc cagactgtac agacatgttt aaaaaaacac actgcttaac 7680
ctattaaata tgtgttttaga attttataag caaatataaa tactgtaaaa agtcacttta 7740
ttttatttttt cagcattatg tacataaata tgaagaggaa attatcttca ggttgatatc 7800
acaatcactt ttcttacttt ctgtccatag tactttttca tgaaagaaat ttgctaaata 7860
agacatgaaa acaagactgg gtagttgtag atttctgctt tttaaattac atttgctaatt 7920
tttagattat ttcacaattt taaggagcaa aatagggttca cgattcatat ccaaattatg 7980
ctttgcaatt ggaaaagggt ttaaaatttt atttatattt ctggtagtac ctgtactaac 8040
tgaattgaag gtagtgctta tgttattttt gttctttttt tctgacttcg gtttatgttt 8100
tcattttcttt ggagtaatgc tgctctagat tgttctaaat agaatgtggg cttcataatt 8160
ttttttttcca caaaaacaga gtagtcaact tatatagtca attacatcag gacattttgt 8220
gtttcttaca gaagcaaacc ataggctcct cttttcctta aaactactta gataaactgt 8280
attcgtgaac tgcatgctgg aaaatgctac tattatgcta aataatgcta accaacattt 8340
aaaatgtgca aaactaataa agattacatt ttttatttt 8379
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<210> 54
<211> 2009
<212> PRT
<213> homo sapiens
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<400> 54
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Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15
```

```
Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30
```

```
Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45
```

Updated Seq Listing2.ST25.txt

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
180 185 190

Leu Asn Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Updated Seq Listing2.ST25.txt

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Updated Seq Listing2.ST25.txt

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe

805

810

815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Asn | Asn | Lys | Lys | Asp | Ser | Cys | Met | Ser | Asn | His | Thr | Thr | Glu |
| 1055 | | | | | | 1060 | | | | | 1065 | | | |
| Ile | Gly | Lys | Asp | Leu | Asp | Tyr | Leu | Lys | Asp | Val | Asn | Gly | Thr | Thr |
| 1070 | | | | | | 1075 | | | | | 1080 | | | |
| Ser | Gly | Ile | Gly | Thr | Gly | Ser | Ser | Val | Glu | Lys | Tyr | Ile | Ile | Asp |
| 1085 | | | | | | 1090 | | | | | 1095 | | | |
| Glu | Ser | Asp | Tyr | Met | Ser | Phe | Ile | Asn | Asn | Pro | Ser | Leu | Thr | Val |
| 1100 | | | | | | 1105 | | | | | 1110 | | | |
| Thr | Val | Pro | Ile | Ala | Val | Gly | Glu | Ser | Asp | Phe | Glu | Asn | Leu | Asn |
| 1115 | | | | | | 1120 | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| 1130 | | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| 1145 | | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
| 1160 | | | | | | 1165 | | | | | 1170 | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg |
| 1175 | | | | | | 1180 | | | | | 1185 | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln |
| 1190 | | | | | | 1195 | | | | | 1200 | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| 1205 | | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| 1220 | | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| | 1295 | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| | 1310 | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| | 1325 | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| | 1340 | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| | 1355 | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| | 1370 | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| | 1385 | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| | 1400 | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| | 1415 | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| | 1430 | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 1445 | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 1460 | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| 1535 | | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| 1550 | | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| 1655 | | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| 1700 | | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| 1715 | | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| 1745 | | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |

| | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-------------|
| 1760 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu Glu Asn |
| 1775 | | | | | | 1780 | | | | | 1785 | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser Glu Asp |
| 1790 | | | | | | 1795 | | | | | 1800 | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp Pro Asp |
| 1805 | | | | | | 1810 | | | | | 1815 | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe Ala Ala |
| 1820 | | | | | | 1825 | | | | | 1830 | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys Leu Gln |
| 1835 | | | | | | 1840 | | | | | 1845 | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg Ile His |
| 1850 | | | | | | 1855 | | | | | 1860 | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu Gly Glu |
| 1865 | | | | | | 1870 | | | | | 1875 | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu Arg Phe |
| 1880 | | | | | | 1885 | | | | | 1890 | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile Thr Thr |
| 1895 | | | | | | 1900 | | | | | 1905 | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile Ile Gln |
| 1910 | | | | | | 1915 | | | | | 1920 | |
| Arg | Ala | Tyr | Arg | Arg | His | Leu | Leu | Lys | Arg | Thr | Val | Lys Gln Ala |
| 1925 | | | | | | 1930 | | | | | 1935 | |
| Ser | Phe | Thr | Tyr | Asn | Lys | Asn | Lys | Ile | Lys | Gly | Gly | Ala Asn Leu |
| 1940 | | | | | | 1945 | | | | | 1950 | |
| Leu | Ile | Lys | Glu | Asp | Met | Ile | Ile | Asp | Arg | Ile | Asn | Glu Asn Ser |
| 1955 | | | | | | 1960 | | | | | 1965 | |
| Ile | Thr | Glu | Lys | Thr | Asp | Leu | Thr | Met | Ser | Thr | Ala | Ala Cys Pro |
| 1970 | | | | | | 1975 | | | | | 1980 | |
| Pro | Ser | Tyr | Asp | Arg | Val | Thr | Lys | Pro | Ile | Val | Glu | Lys His Glu |
| 1985 | | | | | | 1990 | | | | | 1995 | |

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 <211> 2009
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Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190

Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205

Updated Seq Listing2.ST25.txt

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
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Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
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Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
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Updated Seq Listing2.ST25.txt

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Updated Seq Listing2.ST25.txt

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 Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
 740 745 750
 Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
 755 760 765
 Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
 770 775 780
 Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
 785 790 795 800
 Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
 805 810 815
 Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
 820 825 830
 Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
 835 840 845
 Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
 850 855 860
 Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
 865 870 875 880
 Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895
 Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910
 Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925
 Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940
 Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960
 Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met

965

970

975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Thr Glu Asp Phe Ser Ser Glu Ser Asp Leu Glu Glu Ser Lys Glu
1130 1135 1140

Lys Leu Asn Glu Ser Ser Ser Ser Ser Glu Gly Ser Thr Val Asp
1145 1150 1155

Ile Gly Ala Pro Val Glu Glu Gln Pro Val Val Glu Pro Glu Glu
1160 1165 1170

Thr Leu Glu Pro Glu Ala Cys Phe Thr Glu Gly Cys Val Gln Arg
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Phe Lys Cys Cys Gln Ile Asn Val Glu Glu Gly Arg Gly Lys Gln
1190 1195 1200

Updated Seq Listing2.ST25.txt

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|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn |
| 1205 | | | | | | 1210 | | | | | 1215 | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly |
| 1220 | | | | | | 1225 | | | | | 1230 | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| | 1445 | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| | 1460 | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Val | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| | 1475 | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| | 1490 | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| | 1505 | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| | 1520 | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| | 1535 | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| | 1550 | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| | 1565 | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| | 1580 | | | | | 1585 | | | | | 1590 | | | |
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| | 1595 | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| | 1610 | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Arg | Val | Ile |
| | 1625 | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| | 1640 | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| | 1655 | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| | 1670 | | | | | 1675 | | | | | 1680 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
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| | 1685 | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| | 1700 | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| | 1715 | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| | 1730 | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| | 1745 | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| | 1760 | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| | 1775 | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| | 1790 | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| | 1805 | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| | 1820 | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |
| | 1835 | | | | | 1840 | | | | | 1845 | | | |
| Leu | Ile | Ala | Met | Asp | Leu | Pro | Met | Val | Ser | Gly | Asp | Arg | Ile | His |
| | 1850 | | | | | 1855 | | | | | 1860 | | | |
| Cys | Leu | Asp | Ile | Leu | Phe | Ala | Phe | Thr | Lys | Arg | Val | Leu | Gly | Glu |
| | 1865 | | | | | 1870 | | | | | 1875 | | | |
| Ser | Gly | Glu | Met | Asp | Ala | Leu | Arg | Ile | Gln | Met | Glu | Glu | Arg | Phe |
| | 1880 | | | | | 1885 | | | | | 1890 | | | |
| Met | Ala | Ser | Asn | Pro | Ser | Lys | Val | Ser | Tyr | Gln | Pro | Ile | Thr | Thr |
| | 1895 | | | | | 1900 | | | | | 1905 | | | |
| Thr | Leu | Lys | Arg | Lys | Gln | Glu | Glu | Val | Ser | Ala | Val | Ile | Ile | Gln |

Updated Seq Listing2.ST25.txt

1910

1915

1920

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1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

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35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
Page 304

115

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
130 135 140

Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
145 155 160

Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
165 170 175

Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
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Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
195 200 205

Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
210 215 220

Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
225 230 235 240

Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
245 250 255

Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
260 265 270

Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
275 280 285

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Updated Seq Listing2.ST25.txt

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Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
565 570 575

Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
580 585 590

Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
595 600 605

Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
610 615 620

Updated Seq Listing2.ST25.txt

Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
625 630 635 640

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Updated Seq Listing2.ST25.txt

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
 885 890 895
 Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
 900 905 910
 Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
 915 920 925
 Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
 930 935 940
 Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
 945 950 955 960
 Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
 965 970 975
 Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
 980 985 990
 Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
 995 1000 1005
 Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
 1010 1015 1020
 Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
 1025 1030 1035
 Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
 1040 1045 1050
 Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
 1055 1060 1065
 Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
 1070 1075 1080
 Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
 1085 1090 1095
 Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
 1100 1105 1110
 Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
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Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|------|-----|-----|--|
| 1115 | | | | | | 1120 | | | | | | 1125 | | | |
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu | |
| 1130 | | | | | | 1135 | | | | | 1140 | | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp | |
| 1145 | | | | | | 1150 | | | | | 1155 | | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu | |
| 1160 | | | | | | 1165 | | | | | 1170 | | | | |
| Thr | Leu | Glu | Pro | Glu | Ala | Cys | Phe | Thr | Glu | Gly | Cys | Val | Gln | Arg | |
| 1175 | | | | | | 1180 | | | | | 1185 | | | | |
| Phe | Lys | Cys | Cys | Gln | Ile | Asn | Val | Glu | Glu | Gly | Arg | Gly | Lys | Gln | |
| 1190 | | | | | | 1195 | | | | | 1200 | | | | |
| Trp | Trp | Asn | Leu | Arg | Arg | Thr | Cys | Phe | Arg | Ile | Val | Glu | His | Asn | |
| 1205 | | | | | | 1210 | | | | | 1215 | | | | |
| Trp | Phe | Glu | Thr | Phe | Ile | Val | Phe | Met | Ile | Leu | Leu | Ser | Ser | Gly | |
| 1220 | | | | | | 1225 | | | | | 1230 | | | | |
| Ala | Leu | Ala | Phe | Glu | Asp | Ile | Tyr | Ile | Asp | Gln | Arg | Lys | Thr | Ile | |
| 1235 | | | | | | 1240 | | | | | 1245 | | | | |
| Lys | Thr | Met | Leu | Glu | Tyr | Ala | Asp | Lys | Val | Phe | Thr | Tyr | Ile | Phe | |
| 1250 | | | | | | 1255 | | | | | 1260 | | | | |
| Ile | Leu | Glu | Met | Leu | Leu | Lys | Trp | Val | Ala | Tyr | Gly | Tyr | Gln | Thr | |
| 1265 | | | | | | 1270 | | | | | 1275 | | | | |
| Tyr | Phe | Thr | Asn | Ala | Trp | Cys | Trp | Leu | Asp | Phe | Leu | Ile | Val | Asp | |
| 1280 | | | | | | 1285 | | | | | 1290 | | | | |
| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu | |
| 1295 | | | | | | 1300 | | | | | 1305 | | | | |
| Leu | Gly | Ala | Ile | Lys | Ser | Leu | Arg | Thr | Leu | Arg | Ala | Leu | Arg | Pro | |
| 1310 | | | | | | 1315 | | | | | 1320 | | | | |
| Leu | Arg | Ala | Leu | Ser | Arg | Phe | Glu | Gly | Met | Arg | Val | Val | Val | Asn | |
| 1325 | | | | | | 1330 | | | | | 1335 | | | | |
| Ala | Leu | Leu | Gly | Ala | Ile | Pro | Ser | Ile | Met | Asn | Val | Leu | Leu | Val | |
| 1340 | | | | | | 1345 | | | | | 1350 | | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Cys | Leu | Ile | Phe | Trp | Leu | Ile | Phe | Ser | Ile | Met | Gly | Val | Asn | Leu |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Phe | Ala | Gly | Lys | Phe | Tyr | His | Cys | Ile | Asn | Thr | Thr | Thr | Gly | Asp |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Arg | Phe | Asp | Ile | Glu | Asp | Val | Asn | Asn | His | Thr | Asp | Cys | Leu | Lys |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Asn | Phe | Asp | Asn | Val | Gly | Phe | Gly | Tyr | Leu | Ser | Leu | Leu | Gln | Val |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Ala | Thr | Phe | Lys | Gly | Trp | Met | Asp | Ile | Met | Tyr | Ala | Ala | Val | Asp |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Ser | Arg | Asn | Val | Glu | Leu | Gln | Pro | Lys | Tyr | Glu | Lys | Ser | Leu | Tyr |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Met | Tyr | Leu | Tyr | Phe | Val | Ile | Phe | Ile | Ile | Phe | Gly | Ser | Phe | Phe |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Thr | Leu | Asn | Leu | Phe | Ile | Gly | Val | Ile | Ile | Asp | Asn | Phe | Asn | Gln |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |
| Gln | Lys | Lys | Lys | Phe | Gly | Gly | Gln | Asp | Ile | Phe | Met | Thr | Glu | Glu |
| 1490 | | | | | | 1495 | | | | | 1500 | | | |
| Gln | Lys | Lys | Tyr | Tyr | Asn | Ala | Met | Lys | Lys | Leu | Gly | Ser | Lys | Lys |
| 1505 | | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gln | Lys | Pro | Ile | Pro | Arg | Pro | Gly | Asn | Lys | Phe | Gln | Gly | Met |
| 1520 | | | | | | 1525 | | | | | 1530 | | | |
| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
| 1535 | | | | | | 1540 | | | | | 1545 | | | |
| Ile | Leu | Ile | Cys | Leu | Asn | Met | Val | Thr | Met | Met | Val | Glu | Thr | Asp |
| 1550 | | | | | | 1555 | | | | | 1560 | | | |
| Asp | Gln | Ser | Glu | Tyr | Val | Thr | Thr | Ile | Leu | Ser | Arg | Ile | Asn | Leu |
| 1565 | | | | | | 1570 | | | | | 1575 | | | |
| Val | Phe | Ile | Val | Leu | Phe | Thr | Gly | Glu | Cys | Val | Leu | Lys | Leu | Ile |
| 1580 | | | | | | 1585 | | | | | 1590 | | | |

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Ser | Leu | Arg | His | Tyr | Tyr | Phe | Thr | Ile | Gly | Trp | Asn | Ile | Phe | Asp |
| 1595 | | | | | | 1600 | | | | | 1605 | | | |
| Phe | Val | Val | Val | Ile | Leu | Ser | Ile | Val | Gly | Met | Phe | Leu | Ala | Glu |
| 1610 | | | | | | 1615 | | | | | 1620 | | | |
| Leu | Ile | Glu | Lys | Tyr | Phe | Val | Ser | Pro | Thr | Leu | Phe | Gln | Val | Ile |
| 1625 | | | | | | 1630 | | | | | 1635 | | | |
| Arg | Leu | Ala | Arg | Ile | Gly | Arg | Ile | Leu | Arg | Leu | Ile | Lys | Gly | Ala |
| 1640 | | | | | | 1645 | | | | | 1650 | | | |
| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
| 1655 | | | | | | 1660 | | | | | 1665 | | | |
| Ala | Leu | Phe | Asn | Ile | Gly | Leu | Leu | Leu | Phe | Leu | Val | Met | Phe | Ile |
| 1670 | | | | | | 1675 | | | | | 1680 | | | |
| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | | | |
| Val | Gly | Ile | Asp | Asp | Met | Phe | Asn | Phe | Glu | Thr | Phe | Gly | Asn | Ser |
| 1700 | | | | | | 1705 | | | | | 1710 | | | |
| Met | Ile | Cys | Leu | Phe | Gln | Ile | Thr | Thr | Ser | Ala | Gly | Trp | Asp | Gly |
| 1715 | | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | | | |
| Asn | Lys | Val | Asn | Pro | Gly | Ser | Ser | Val | Lys | Gly | Asp | Cys | Gly | Asn |
| 1745 | | | | | | 1750 | | | | | 1755 | | | |
| Pro | Ser | Val | Gly | Ile | Phe | Phe | Phe | Val | Ser | Tyr | Ile | Ile | Ile | Ser |
| 1760 | | | | | | 1765 | | | | | 1770 | | | |
| Phe | Leu | Val | Val | Val | Asn | Met | Tyr | Ile | Ala | Val | Ile | Leu | Glu | Asn |
| 1775 | | | | | | 1780 | | | | | 1785 | | | |
| Phe | Ser | Val | Ala | Thr | Glu | Glu | Ser | Ala | Glu | Pro | Leu | Ser | Glu | Asp |
| 1790 | | | | | | 1795 | | | | | 1800 | | | |
| Asp | Phe | Glu | Met | Phe | Tyr | Glu | Val | Trp | Glu | Lys | Phe | Asp | Pro | Asp |
| 1805 | | | | | | 1810 | | | | | 1815 | | | |
| Ala | Thr | Gln | Phe | Met | Glu | Phe | Glu | Lys | Leu | Ser | Gln | Phe | Ala | Ala |
| 1820 | | | | | | 1825 | | | | | 1830 | | | |

Updated Seq Listing2.ST25.txt

Ala Leu Glu Pro Pro Leu Asn Leu Pro Gln Pro Asn Lys Leu Gln
1835 1840 1845

Leu Ile Ala Met Asp Leu Pro Met Val Ser Gly Asp Arg Ile His
1850 1855 1860

Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
1895 1900 1905

Thr Leu Lys Arg Lys Gln Glu Glu Val Ser Ala Val Ile Ile Gln
1910 1915 1920

Arg Ala Tyr Arg Arg His Leu Leu Lys Arg Thr Val Lys Gln Ala
1925 1930 1935

Ser Phe Thr Tyr Asn Lys Asn Lys Ile Lys Gly Gly Ala Asn Leu
1940 1945 1950

Leu Ile Lys Glu Asp Met Ile Ile Asp Arg Ile Asn Glu Asn Ser
1955 1960 1965

Ile Thr Glu Lys Thr Asp Leu Thr Met Ser Thr Ala Ala Cys Pro
1970 1975 1980

Pro Ser Tyr Asp Arg Val Thr Lys Pro Ile Val Glu Lys His Glu
1985 1990 1995

Gln Glu Gly Lys Asp Glu Lys Ala Lys Gly Lys
2000 2005

<210> 57
<211> 621
<212> PRT
<213> homo sapiens

<400> 57

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Updated Seq Listing2.ST25.txt

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
 35 40 45
 Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
 50 55 60
 Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
 65 70 75 80
 Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
 85 90 95
 Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
 100 105 110
 Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
 115 120 125
 Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140
 Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160
 Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175
 Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190
 Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205
 Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220
 Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu

275

Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
290 295 300

Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
305 310 315 320

Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
325 330 335

Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
340 345 350

Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
355 360 365

Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
370 375 380

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
385 390 395 400

Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
405 410 415

Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
420 425 430

Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
435 440 445

Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
450 455 460

Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
465 470 475 480

Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
485 490 495

Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
500 505 510

Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
515 520 525

Updated Seq Listing2.ST25.txt

Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
530 535 540

Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
545 550 555 560

Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Ser Ala
565 570 575

Leu Glu Gly Glu Gln Arg Met Trp Asp Leu Arg Thr Thr Ser Gln Met
580 585 590

Met Ser Thr Ala Pro Leu Arg Ile Thr Arg Ala Val Glu Ile Pro Cys
595 600 605

Leu Cys Pro Asp Asp Thr Glu Arg Asp Ala Thr Ala Thr
610 615 620

<210> 58
<211> 1942
<212> PRT
<213> homo sapiens

<400> 58

Met Glu Gln Thr Val Leu Val Pro Pro Gly Pro Asp Ser Phe Asn Phe
1 5 10 15

Phe Thr Arg Glu Ser Leu Ala Ala Ile Glu Arg Arg Ile Ala Glu Glu
20 25 30

Lys Ala Lys Asn Pro Lys Pro Asp Lys Lys Asp Asp Asp Glu Asn Gly
35 40 45

Pro Lys Pro Asn Ser Asp Leu Glu Ala Gly Lys Asn Leu Pro Phe Ile
50 55 60

Tyr Gly Asp Ile Pro Pro Glu Met Val Ser Glu Pro Leu Glu Asp Leu
65 70 75 80

Asp Pro Tyr Tyr Ile Asn Lys Lys Thr Phe Ile Val Leu Asn Lys Leu
85 90 95

Lys Ala Ile Phe Arg Phe Ser Ala Thr Ser Ala Leu Tyr Ile Leu Thr
100 105 110

Pro Phe Asn Pro Leu Arg Lys Ile Ala Ile Lys Ile Leu Val His Ser
115 120 125

Updated Seq Listing2.ST25.txt

Leu Phe Ser Met Leu Ile Met Cys Thr Ile Leu Thr Asn Cys Val Phe
 130 135 140
 Met Thr Met Ser Asn Pro Pro Asp Trp Thr Lys Asn Val Glu Tyr Thr
 145 150 155 160
 Phe Thr Gly Ile Tyr Thr Phe Glu Ser Leu Ile Lys Ile Ile Ala Arg
 165 170 175
 Gly Phe Cys Leu Glu Asp Phe Thr Phe Leu Arg Asp Pro Trp Asn Trp
 180 185 190
 Leu Asp Phe Thr Val Ile Thr Phe Ala Tyr Val Thr Glu Phe Val Asp
 195 200 205
 Leu Gly Asn Val Ser Ala Leu Arg Thr Phe Arg Val Leu Arg Ala Leu
 210 215 220
 Lys Thr Ile Ser Val Ile Pro Gly Leu Lys Thr Ile Val Gly Ala Leu
 225 230 235 240
 Ile Gln Ser Val Lys Lys Leu Ser Asp Val Met Ile Leu Thr Val Phe
 245 250 255
 Cys Leu Ser Val Phe Ala Leu Ile Gly Leu Gln Leu Phe Met Gly Asn
 260 265 270
 Leu Arg Asn Lys Cys Ile Gln Trp Pro Pro Thr Asn Ala Ser Leu Glu
 275 280 285
 Glu His Ser Ile Glu Lys Asn Ile Thr Val Asn Tyr Asn Gly Thr Leu
 290 295 300
 Ile Asn Glu Thr Val Phe Glu Phe Asp Trp Lys Ser Tyr Ile Gln Asp
 305 310 315 320
 Ser Arg Tyr His Tyr Phe Leu Glu Gly Phe Leu Asp Ala Leu Leu Cys
 325 330 335
 Gly Asn Ser Ser Asp Ala Gly Gln Cys Pro Glu Gly Tyr Met Cys Val
 340 345 350
 Lys Ala Gly Arg Asn Pro Asn Tyr Gly Tyr Thr Ser Phe Asp Thr Phe
 355 360 365
 Ser Trp Ala Phe Leu Ser Leu Phe Arg Leu Met Thr Gln Asp Phe Trp
 370 375 380

Updated Seq Listing2.ST25.txt

Glu Asn Leu Tyr Gln Leu Thr Leu Arg Ala Ala Gly Lys Thr Tyr Met
 385 390 395 400
 Ile Phe Phe Val Leu Val Ile Phe Leu Gly Ser Phe Tyr Leu Ile Asn
 405 410 415
 Leu Ile Leu Ala Val Val Ala Met Ala Tyr Glu Glu Gln Asn Gln Ala
 420 425 430
 Thr Leu Glu Glu Ala Glu Gln Lys Glu Ala Glu Phe Gln Gln Met Ile
 435 440 445
 Glu Gln Leu Lys Lys Gln Gln Glu Ala Ala Gln Gln Ala Ala Thr Ala
 450 455 460
 Thr Ala Ser Glu His Ser Arg Glu Pro Ser Ala Ala Gly Arg Leu Ser
 465 470 475 480
 Asp Ser Ser Ser Glu Ala Ser Lys Leu Ser Ser Lys Ser Ala Lys Glu
 485 490 495
 Arg Arg Asn Arg Arg Lys Lys Arg Lys Gln Lys Glu Gln Ser Gly Gly
 500 505 510
 Glu Glu Lys Asp Glu Asp Glu Phe Gln Lys Ser Glu Ser Glu Asp Ser
 515 520 525
 Ile Arg Arg Lys Gly Phe Arg Phe Ser Ile Glu Gly Asn Arg Leu Thr
 530 535 540
 Tyr Glu Lys Arg Tyr Ser Ser Pro His Gln Ser Leu Leu Ser Ile Arg
 545 550 555 560
 Gly Ser Leu Phe Ser Pro Arg Arg Asn Ser Arg Thr Ser Leu Phe Ser
 565 570 575
 Phe Arg Gly Arg Ala Lys Asp Val Gly Ser Glu Asn Asp Phe Ala Asp
 580 585 590
 Asp Glu His Ser Thr Phe Glu Asp Asn Glu Ser Arg Arg Asp Ser Leu
 595 600 605
 Phe Val Pro Arg Arg His Gly Glu Arg Arg Asn Ser Asn Leu Ser Gln
 610 615 620
 Thr Ser Arg Ser Ser Arg Met Leu Ala Val Phe Pro Ala Asn Gly Lys
 625 630 635 640

Updated Seq Listing2.ST25.txt

Met His Ser Thr Val Asp Cys Asn Gly Val Val Ser Leu Val Gly Gly
645 650 655

Pro Ser Val Pro Thr Ser Pro Val Gly Gln Leu Leu Pro Glu Val Ile
660 665 670

Ile Asp Lys Pro Ala Thr Asp Asp Asn Gly Thr Thr Thr Glu Thr Glu
675 680 685

Met Arg Lys Arg Arg Ser Ser Ser Phe His Val Ser Met Asp Phe Leu
690 695 700

Glu Asp Pro Ser Gln Arg Gln Arg Ala Met Ser Ile Ala Ser Ile Leu
705 710 715 720

Thr Asn Thr Val Glu Glu Leu Glu Glu Ser Arg Gln Lys Cys Pro Pro
725 730 735

Cys Trp Tyr Lys Phe Ser Asn Ile Phe Leu Ile Trp Asp Cys Ser Pro
740 745 750

Tyr Trp Leu Lys Val Lys His Val Val Asn Leu Val Val Met Asp Pro
755 760 765

Phe Val Asp Leu Ala Ile Thr Ile Cys Ile Val Leu Asn Thr Leu Phe
770 775 780

Met Ala Met Glu His Tyr Pro Met Thr Asp His Phe Asn Asn Val Leu
785 790 795 800

Thr Val Gly Asn Leu Val Phe Thr Gly Ile Phe Thr Ala Glu Met Phe
805 810 815

Leu Lys Ile Ile Ala Met Asp Pro Tyr Tyr Tyr Phe Gln Glu Gly Trp
820 825 830

Asn Ile Phe Asp Gly Phe Ile Val Thr Leu Ser Leu Val Glu Leu Gly
835 840 845

Leu Ala Asn Val Glu Gly Leu Ser Val Leu Arg Ser Phe Arg Leu Leu
850 855 860

Arg Val Phe Lys Leu Ala Lys Ser Trp Pro Thr Leu Asn Met Leu Ile
865 870 875 880

Lys Ile Ile Gly Asn Ser Val Gly Ala Leu Gly Asn Leu Thr Leu Val
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885

890

895

Leu Ala Ile Ile Val Phe Ile Phe Ala Val Val Gly Met Gln Leu Phe
900 905 910

Gly Lys Ser Tyr Lys Asp Cys Val Cys Lys Ile Ala Ser Asp Cys Gln
915 920 925

Leu Pro Arg Trp His Met Asn Asp Phe Phe His Ser Phe Leu Ile Val
930 935 940

Phe Arg Val Leu Cys Gly Glu Trp Ile Glu Thr Met Trp Asp Cys Met
945 950 955 960

Glu Val Ala Gly Gln Ala Met Cys Leu Thr Val Phe Met Met Val Met
965 970 975

Val Ile Gly Asn Leu Val Val Leu Asn Leu Phe Leu Ala Leu Leu Leu
980 985 990

Ser Ser Phe Ser Ala Asp Asn Leu Ala Ala Thr Asp Asp Asp Asn Glu
995 1000 1005

Met Asn Asn Leu Gln Ile Ala Val Asp Arg Met His Lys Gly Val
1010 1015 1020

Ala Tyr Val Lys Arg Lys Ile Tyr Glu Phe Ile Gln Gln Ser Phe
1025 1030 1035

Ile Arg Lys Gln Lys Ile Leu Asp Glu Ile Lys Pro Leu Asp Asp
1040 1045 1050

Leu Asn Asn Lys Lys Asp Ser Cys Met Ser Asn His Thr Thr Glu
1055 1060 1065

Ile Gly Lys Asp Leu Asp Tyr Leu Lys Asp Val Asn Gly Thr Thr
1070 1075 1080

Ser Gly Ile Gly Thr Gly Ser Ser Val Glu Lys Tyr Ile Ile Asp
1085 1090 1095

Glu Ser Asp Tyr Met Ser Phe Ile Asn Asn Pro Ser Leu Thr Val
1100 1105 1110

Thr Val Pro Ile Ala Val Gly Glu Ser Asp Phe Glu Asn Leu Asn
1115 1120 1125

Updated Seq Listing2.ST25.txt

| | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Thr | Glu | Asp | Phe | Ser | Ser | Glu | Ser | Asp | Leu | Glu | Glu | Ser | Lys | Glu |
| | 1130 | | | | | 1135 | | | | | 1140 | | | |
| Lys | Leu | Asn | Glu | Ser | Ser | Ser | Ser | Ser | Glu | Gly | Ser | Thr | Val | Asp |
| | 1145 | | | | | 1150 | | | | | 1155 | | | |
| Ile | Gly | Ala | Pro | Val | Glu | Glu | Gln | Pro | Val | Val | Glu | Pro | Glu | Glu |
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| Val | Ser | Leu | Val | Ser | Leu | Thr | Ala | Asn | Ala | Leu | Gly | Tyr | Ser | Glu |
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Updated Seq Listing2.ST25.txt

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| Leu | Ile | Glu | Arg | Asn | Glu | Thr | Ala | Arg | Trp | Lys | Asn | Val | Lys | Val |
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| Val | Phe | Asp | Phe | Val | Thr | Arg | Gln | Val | Phe | Asp | Ile | Ser | Ile | Met |
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Updated Seq Listing2.ST25.txt

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| Lys | Gly | Ile | Arg | Thr | Leu | Leu | Phe | Ala | Leu | Met | Met | Ser | Leu | Pro |
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| Tyr | Ala | Ile | Phe | Gly | Met | Ser | Asn | Phe | Ala | Tyr | Val | Lys | Arg | Glu |
| 1685 | | | | | | 1690 | | | | | 1695 | | | |
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| 1715 | | | | | | 1720 | | | | | 1725 | | | |
| Leu | Leu | Ala | Pro | Ile | Leu | Asn | Ser | Lys | Pro | Pro | Asp | Cys | Asp | Pro |
| 1730 | | | | | | 1735 | | | | | 1740 | | | |
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| 1745 | | | | | | 1750 | | | | | 1755 | | | |
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| 1820 | | | | | | 1825 | | | | | 1830 | | | |
| Ala | Leu | Glu | Pro | Pro | Leu | Asn | Leu | Pro | Gln | Pro | Asn | Lys | Leu | Gln |

1835

1840

1845

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Cys Leu Asp Ile Leu Phe Ala Phe Thr Lys Arg Val Leu Gly Glu
 1865 1870 1875

Ser Gly Glu Met Asp Ala Leu Arg Ile Gln Met Glu Glu Arg Phe
 1880 1885 1890

Met Ala Ser Asn Pro Ser Lys Val Ser Tyr Gln Pro Ile Thr Thr
 1895 1900 1905

Thr Leu Lys Arg Lys Arg Gly Ser Ile Cys Cys His Tyr Ser Ala
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Leu Tyr Val Gln
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